TECHNICAL REPORT RD-77-7

AN EXPLORATORY INVESTIGATION ON REDUCING
SUPERSONIC MISSILE DRAG BY FLUID INJECTION
INTO A TURBULENT BOUNDARY LAYER

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

To determine general effects of fluid injection into a turbulent boundary layer on missile drag and stabilizing forces at angle of attack, an exploratory investigation was made at Mach 1.63 and 2.2. The test model was a body of revolution 10-cal long with a 3-cal tangent ogive nose and stabilizing fins. The mass injection was simulated by nitrogen and injected into the boundary layer from a porous section just aft of the nose body junction. The porous section was varied in length from 0.5 to 1.5 cal. Angle of attack range varied from $-3.5°$ to $+19°$.

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CONTENTS

I. INTRODUCTION

To determine general effects of fluid injection into a turbulent boundary layer on missile drag and stabilizing forces at angle of attack, an exploratory investigation was made at Mach 1.63 and 2.2. The test model was a body of revolution 10-cal long with a 3-cal tangent ogive nose and stabilizing fins. The mass injection was simulated by nitrogen and injected into the boundary layer from a porous section just aft of the nose body junction. The porous section was varied in length from 0.5 to 1.5 cal. Angle of attack range varied from -3.5° to +19°.

II. APPARATUS AND PROCEDURE

The tests were conducted in the Jet Propulsion Laboratory (JPL) 20-in. supersonic wind tunnel. The tunnel was run at Mach 1.63 and 2.2, with a wind-off total pressure of 14 psi.

A diagram of the model as installed for testing is shown in Figure 1. The model is a body of revolution 1.375-in. in diameter with a 3-cal tangent ogive nose and a 7-cal cylindrical afterbody. Three changeable centerbodies with 0.5, 1.0, and 1.5 cal cutouts with stainless steel mesh of 0.36 porosity were used for mass injection sections. Nitrogen was supplied through the sting and channeled through the center of the balance around an air deflector and through the stainless steel mesh. Mass injection rates varied from 1.68×10^{-5} lb/sec to 67.2×10^{-5} lb/sec. Turbulent flow was obtained by a boundary layer trip at the model nose. Reynolds numbers varied from 2.5×10^{5} to 3.0×10^{5}. The model had four rectangular tail surfaces, 1-cal long and 0.5-cal high, with the leading edge located at station 12.375 in. from the nose. The model was tested in the X fin configuration.

Base pressure data from one base pressure tap was obtained at M = 1.63. Force data were obtained by a six component strain gage balance. Effects of bleed on the model C_N, C_M, C_Y, C_n, C_ℓ, and C_A were investigated by varying the mass injection rates F. The mass flow injection data were also compared to a solid body model. Model angle of attack varied from -3.5° to +19°.

III. RESULTS AND DISCUSSION

Figure 2 shows that the effectiveness of mass injection on reducing missile axial force is dependent on the mass injection flow rate, size of the porous section, Mach number, and angle of attack. For the specific set of conditions, M = 2.2, 0.5-cal long, porous

cross section, the flow rate F = 0.004 reduced the axial force coefficient the maximum amount. This was approximately 4% of the total. The mass injection is effective over an angle of attack range of up to 6°.

All other porous sections did not reduce the axial force coefficient. The larger injection sections caused a higher C_A because of bleed into the cavity. At the lower Mach number (M = 1.63), there was no reductions in C_A for any of the injection rates. The effects of the mass injection on the other missile force coefficients at low angle of attack α < 6° are negligible as shown in Figure 3 for F = 0.004.

A plot of C_A versus F (Figure 4a) at M = 2.2, for configuration 705, shows that as the mass injection into the boundary layer is increased there is an initial decrease in the axial force coefficient. The C_A increases as more mass is injected into the boundary layer until the C_A approaches values for the mass injection-off conditions. Each line represents a constant α and values at the left indicate solid body conditions. The data indicated that at approximately F = 0.004 the maximum reduction of axial force coefficient occurs for specific set of conditions. For the lower Mach number, M = 1.63 (Figure 4b), the axial force coefficient is not decreased.

Schlieren's photograph (Figure 5) of the 705-configuration at M = 2.2 and α = 0, indicates for mass injections rates of F = 0, 0.004, the boundary layer has not expanded, and that for mass injection of F = 0.02, the boundary layer is thickened. Also, there is indication that the mass injection is escaping from the boundary layer. A set of Schlieren photos are also presented for α = 18. For the α = 18° case, it is not clear that there is less separation of the boundary layer when there is mass injection in the boundary layer.

A limited comparison of base drag data indicates the mass injection may have and effect on the base drag coefficient. An example of this is shown in Figure 6 for M = 1.63, α = 0, and α = 6°. For the small length grids, there is a reduction in the base drag coefficient at α = 0°. This may or may not be a good indication of influence of the mass flow on the base drag because of the tolerances of accuracy in the base pressure measurement.

Figure 7 shows the component parts of the theoretical axial force coefficient. The bleed effects on longer bodies of revolution can be estimated by using the theoretical body friction drag.

A complete set of tabulated data is presented in the Appendix.

IV.   CONCLUSIONS AND RECOMMENDATION

Feasibility —

a)   Insensitive over a mass injection rate from 1 to 8×10^3. This enables the mass injection mechanism operational tolerance.

b)   Axial force coefficient reduced by 4%, probably would be greater for longer bodies of revolution

c)   Bleed mechanism is dependent on Mach number, bleed chamber size, and bleed rate.

d)   Mass bleed injection effects are not sensitive to small angles of attack of less than 6°.

Recommendation — Mass injection should be investigated further as a possible means of reducing missile drag.
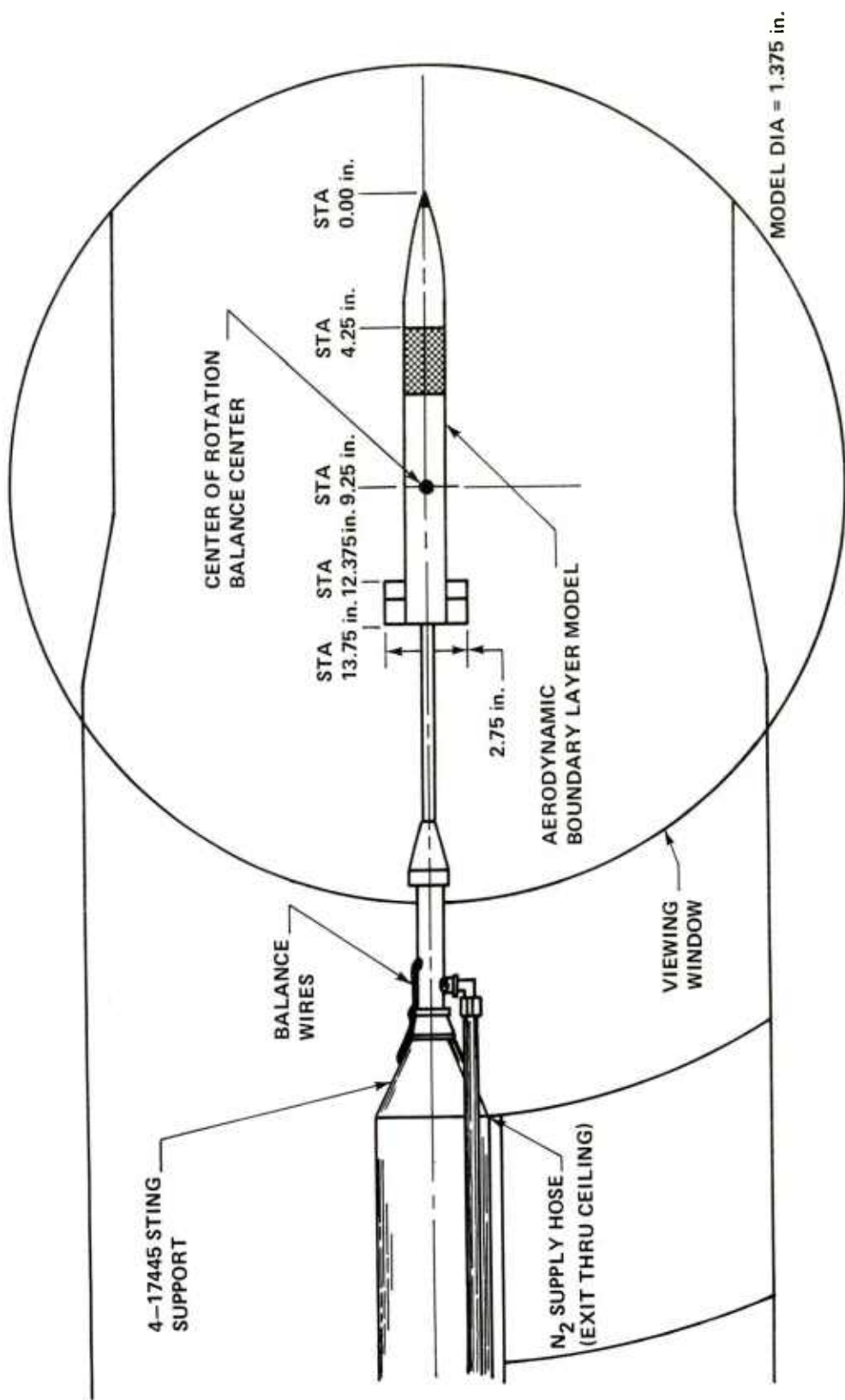
Figure 1. Model installation and dimensions.

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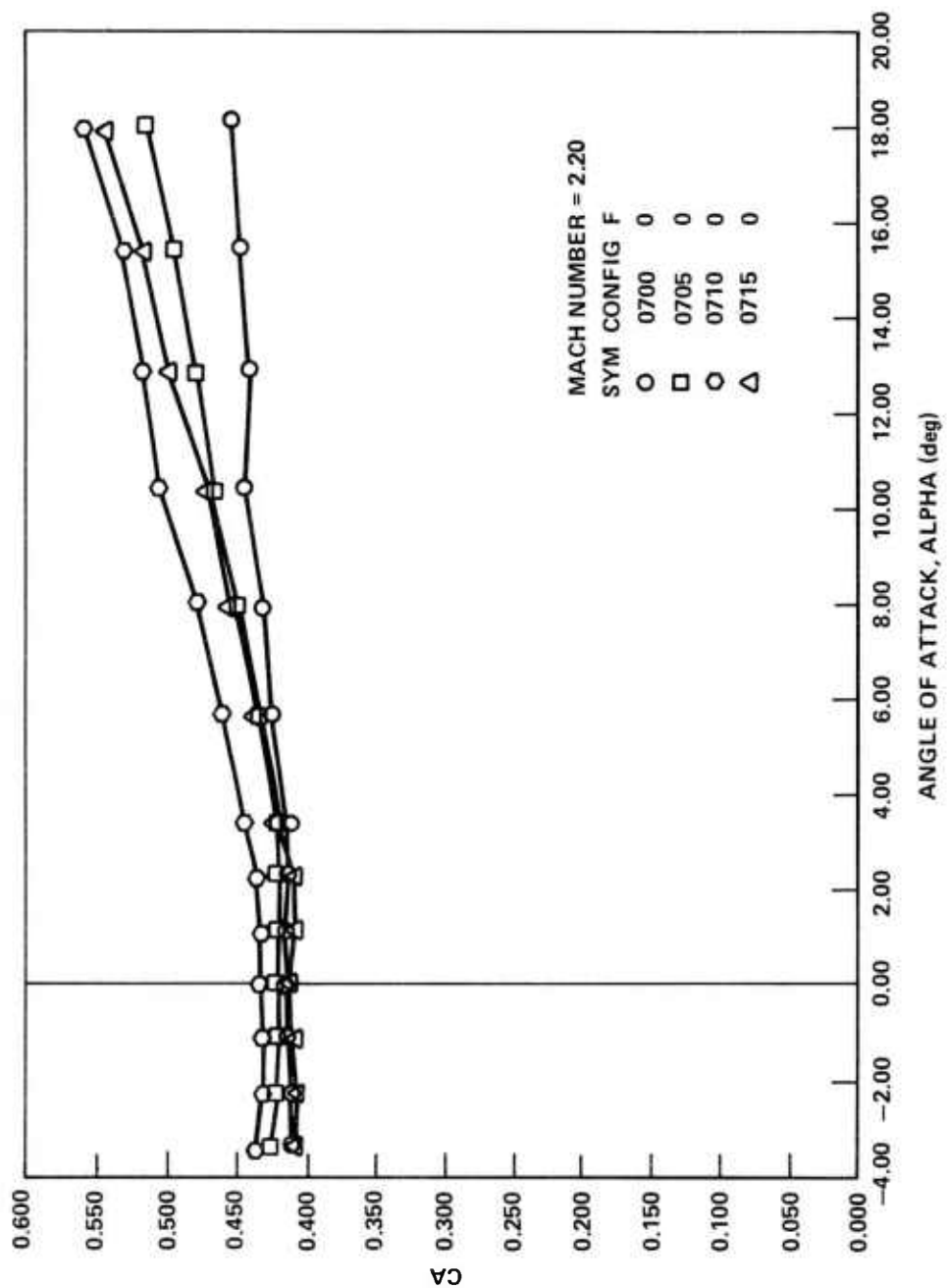
Figure 2. Missile total axial force coefficient versus angle of attack.

7

Figure 2. (Continued).

8

Figure 2. (Continued)

9
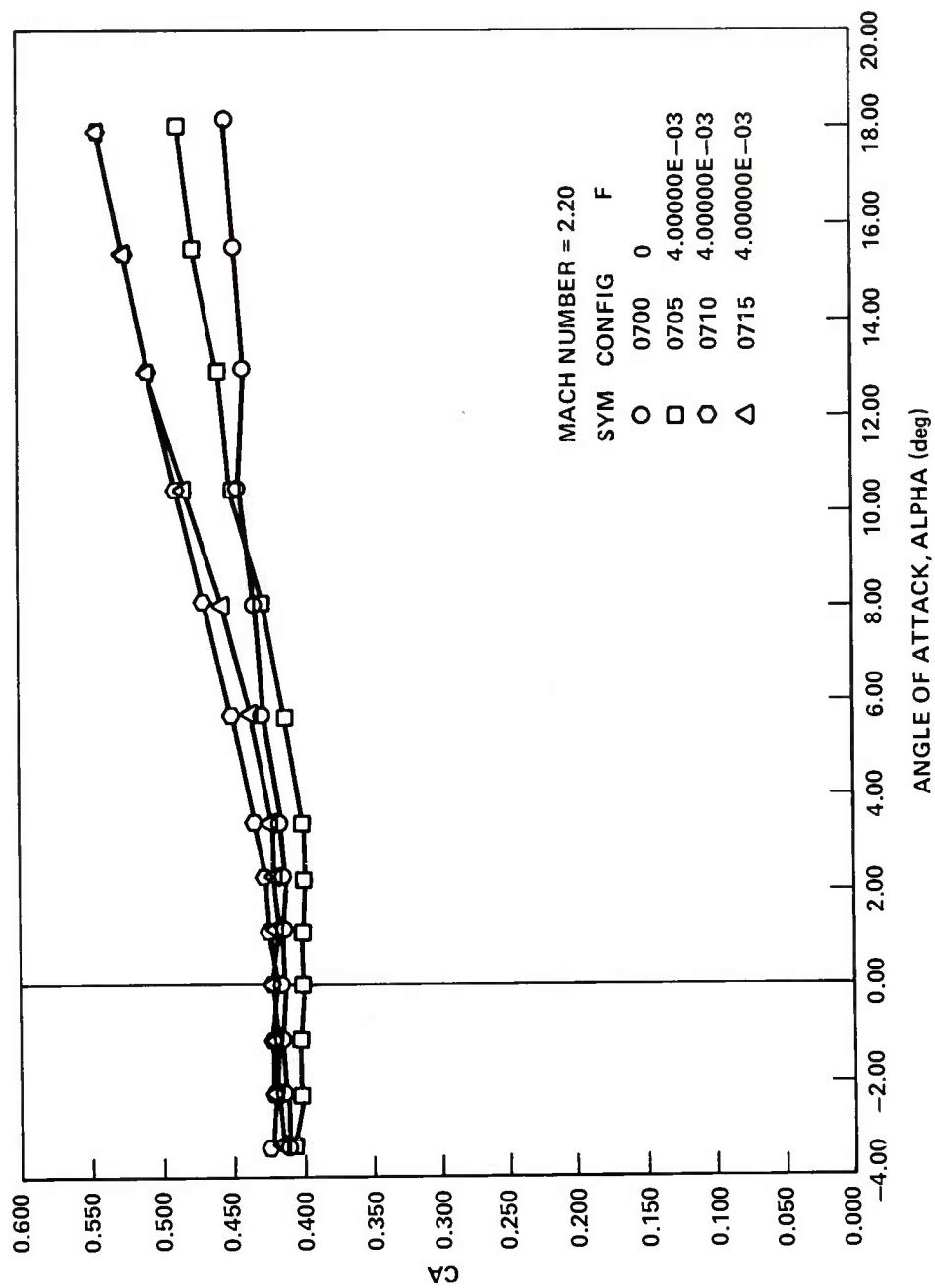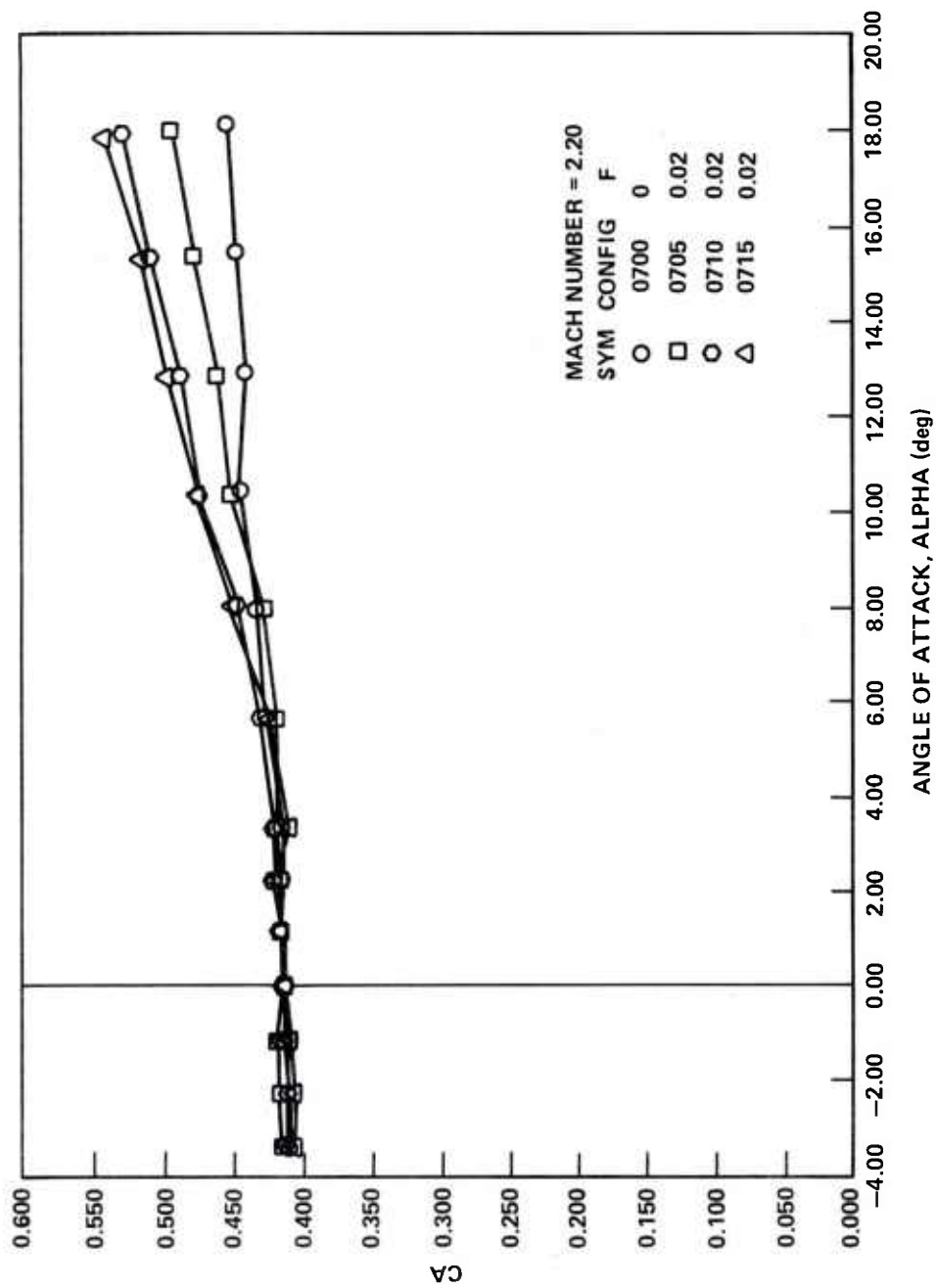
Figure 2. (Continued)

Figure 2.   (Continued)

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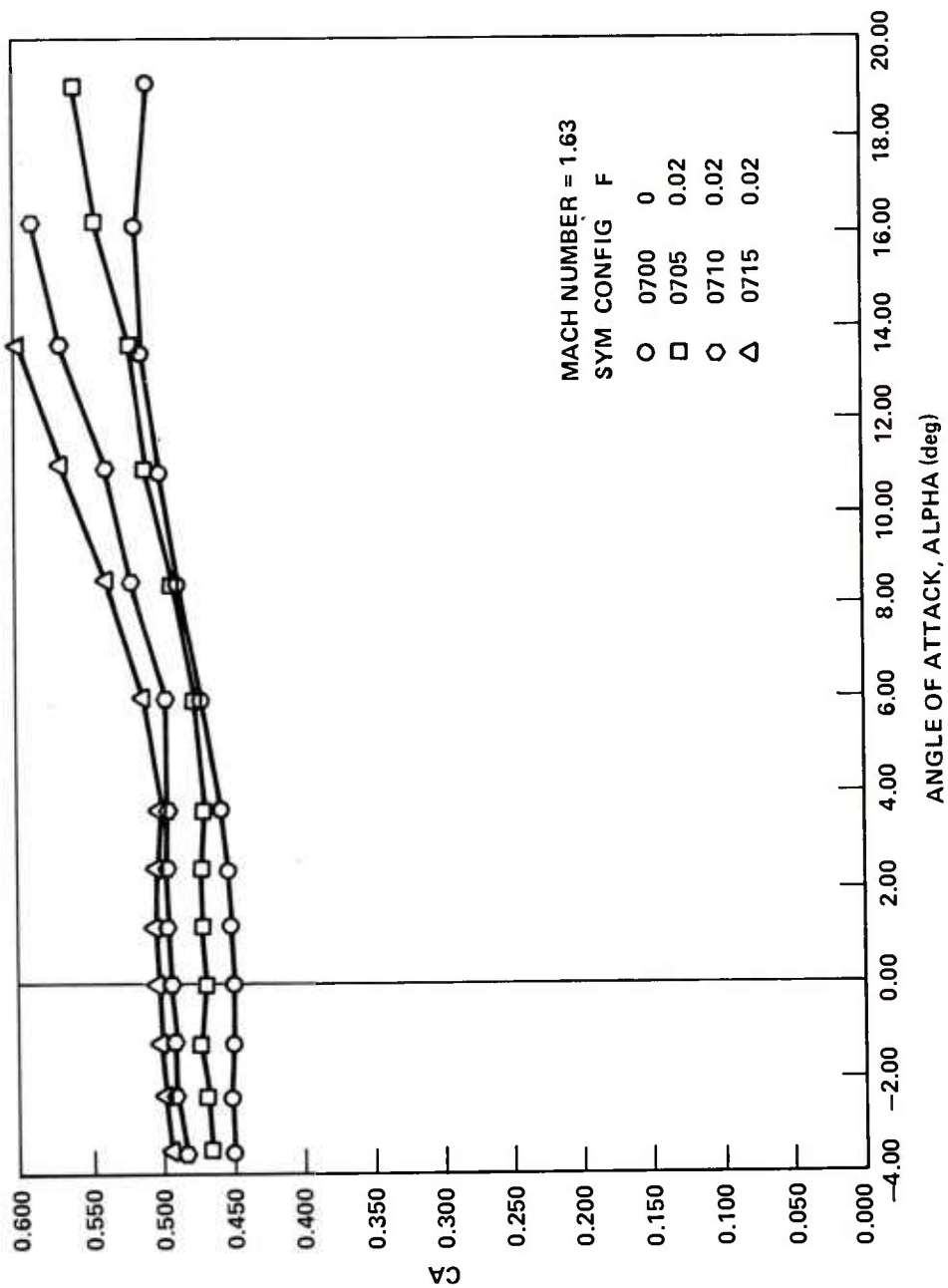
Figure 2. (Concluded).

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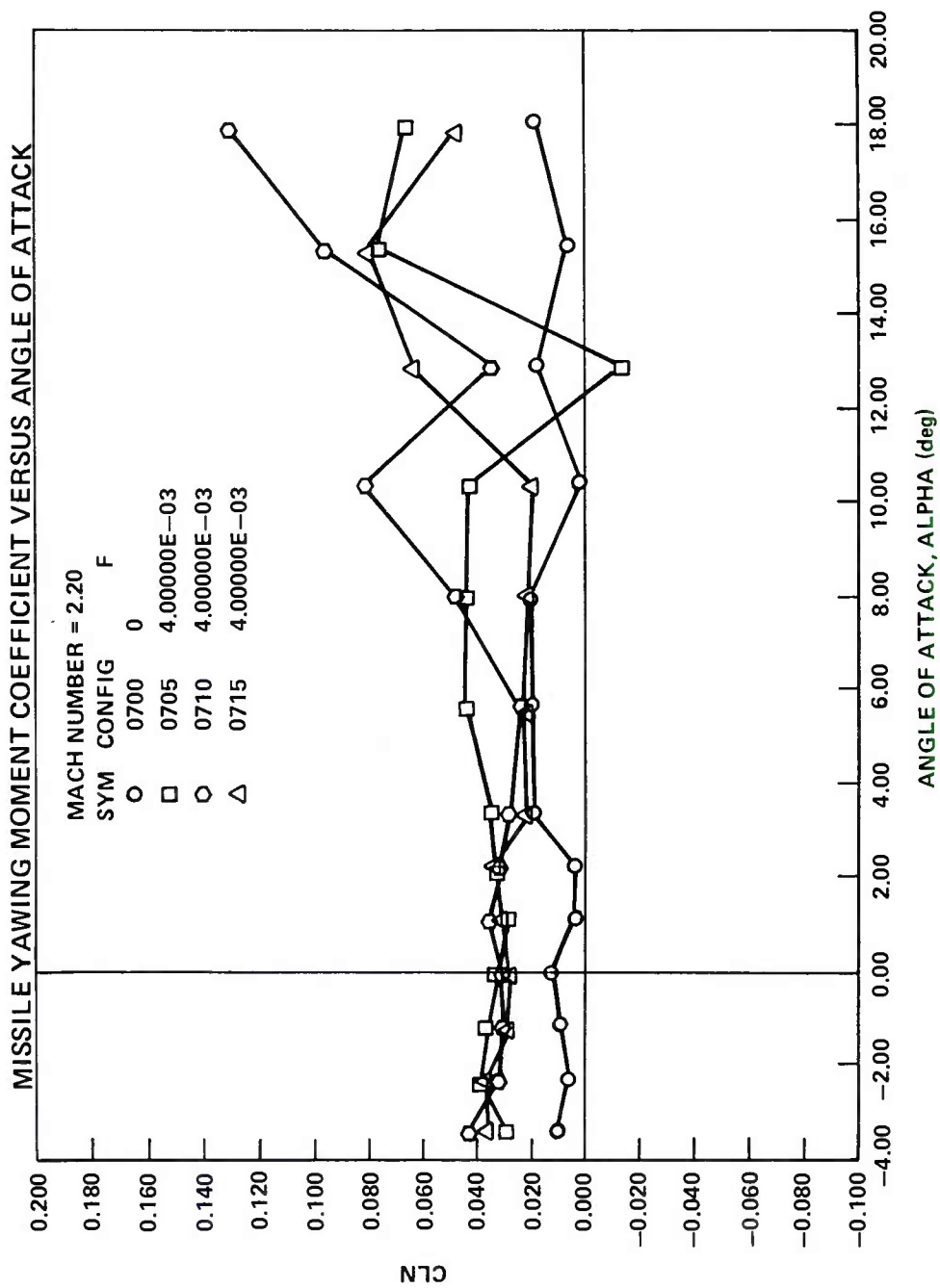
Figure 3. Effects of mass injection on the other missile force coefficients at low angle of attach $\alpha < 6°$ for $F = 0.004$.

Figure 3. (Continued).

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Figure 3. (Continued).

MISSILE SIDE FORCE COEFFICIENT VERSUS ANGLE OF ATTACK

MACH NUMBER = 2.20

SYM	CONFIG	F
O	0700	0
□	0705	4.00000E−03
◊	0710	4.00000E−03
△	0715	4.00000E−03

ANGLE OF ATTACK, ALPHA (deg)

CY

Figure 3. (Continued).

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MISSILE PITCHING MOMENT COEFFICIENT VERSUS ANGLE OF ATTACK

MACH NUMBER = 2.20

SYM	CONFIG	F
O	0700	0
□	0705	4.00000E−03
O	0710	4.00000E−03
△	0715	4.00000E−03
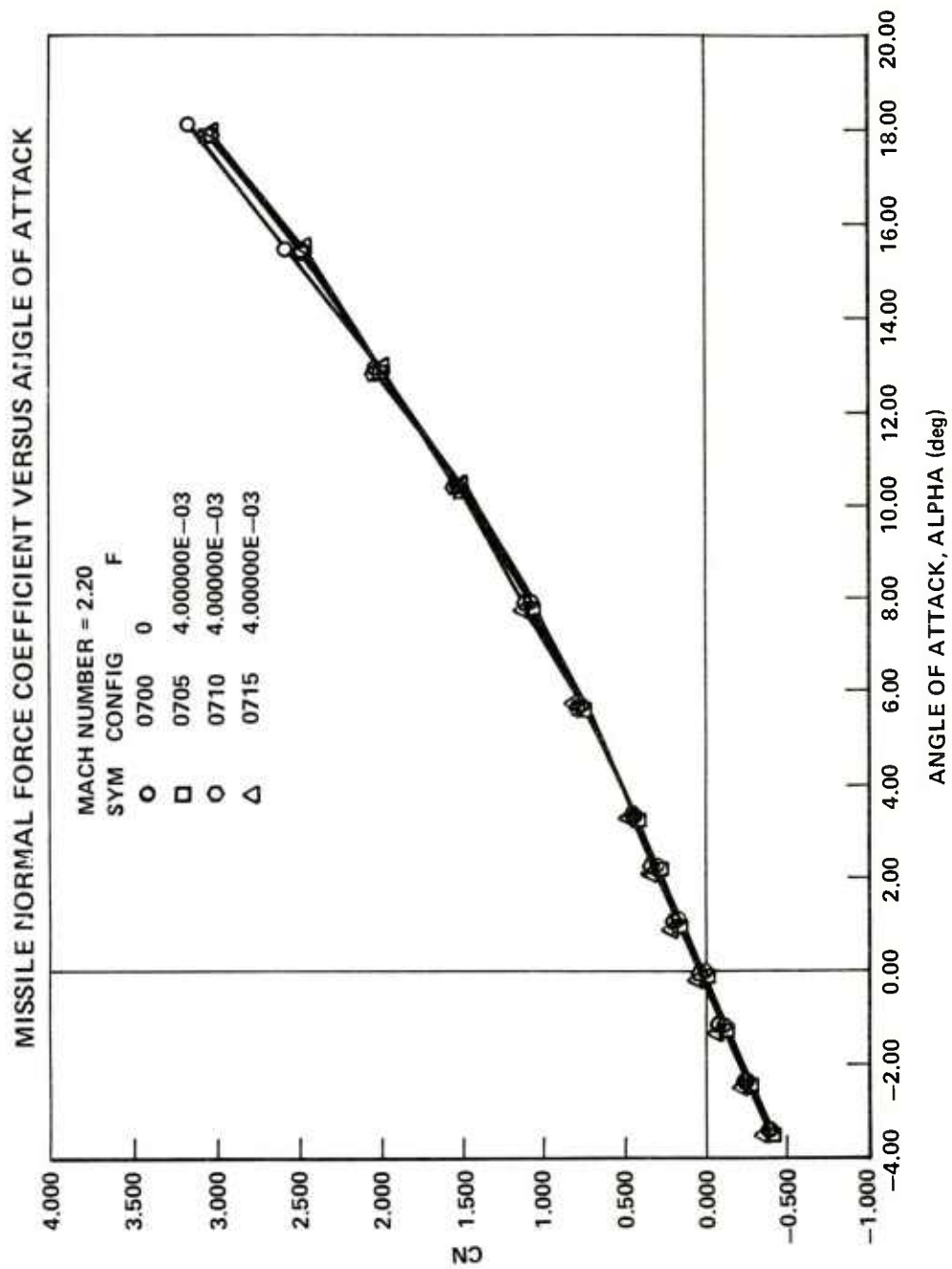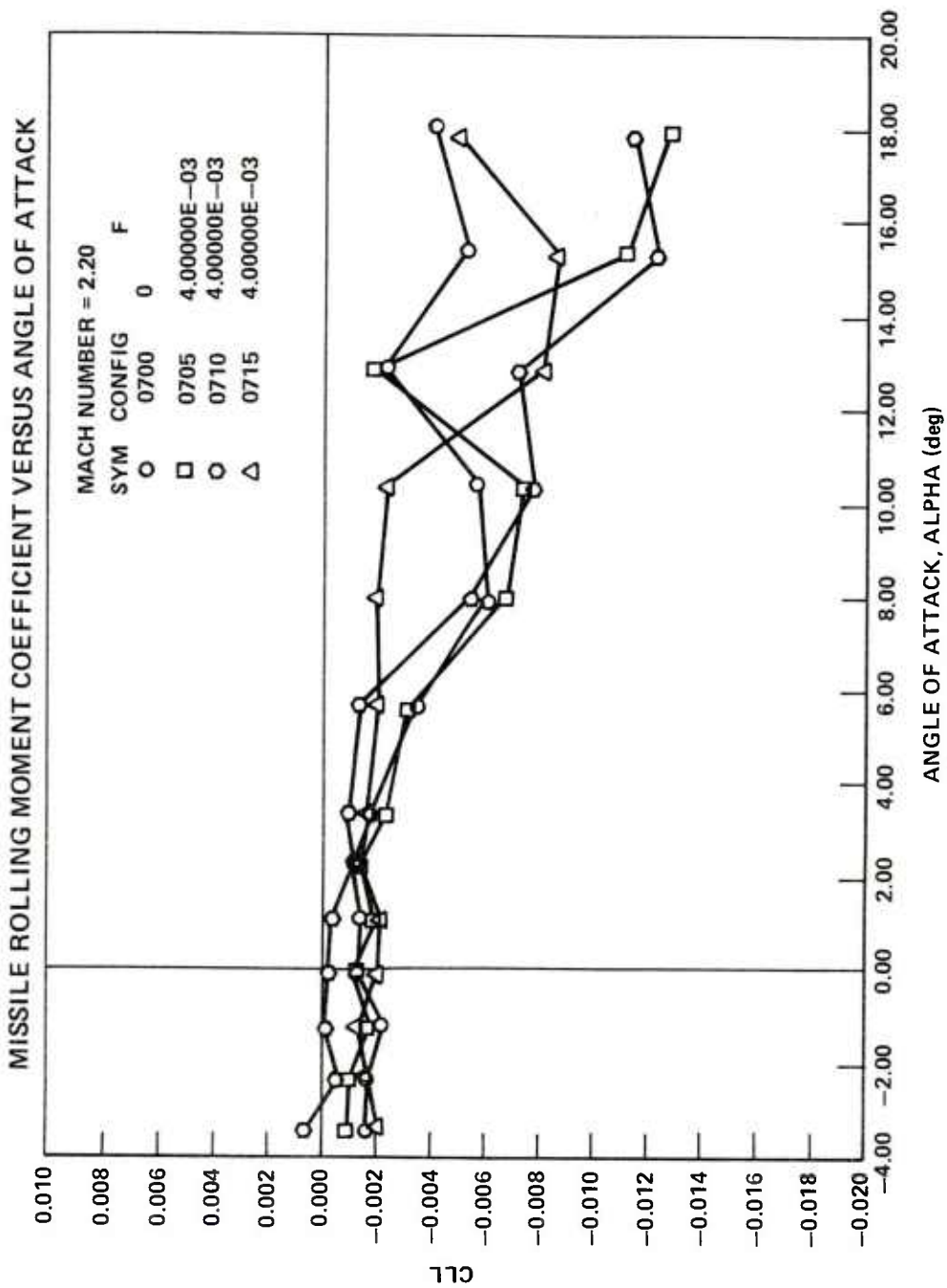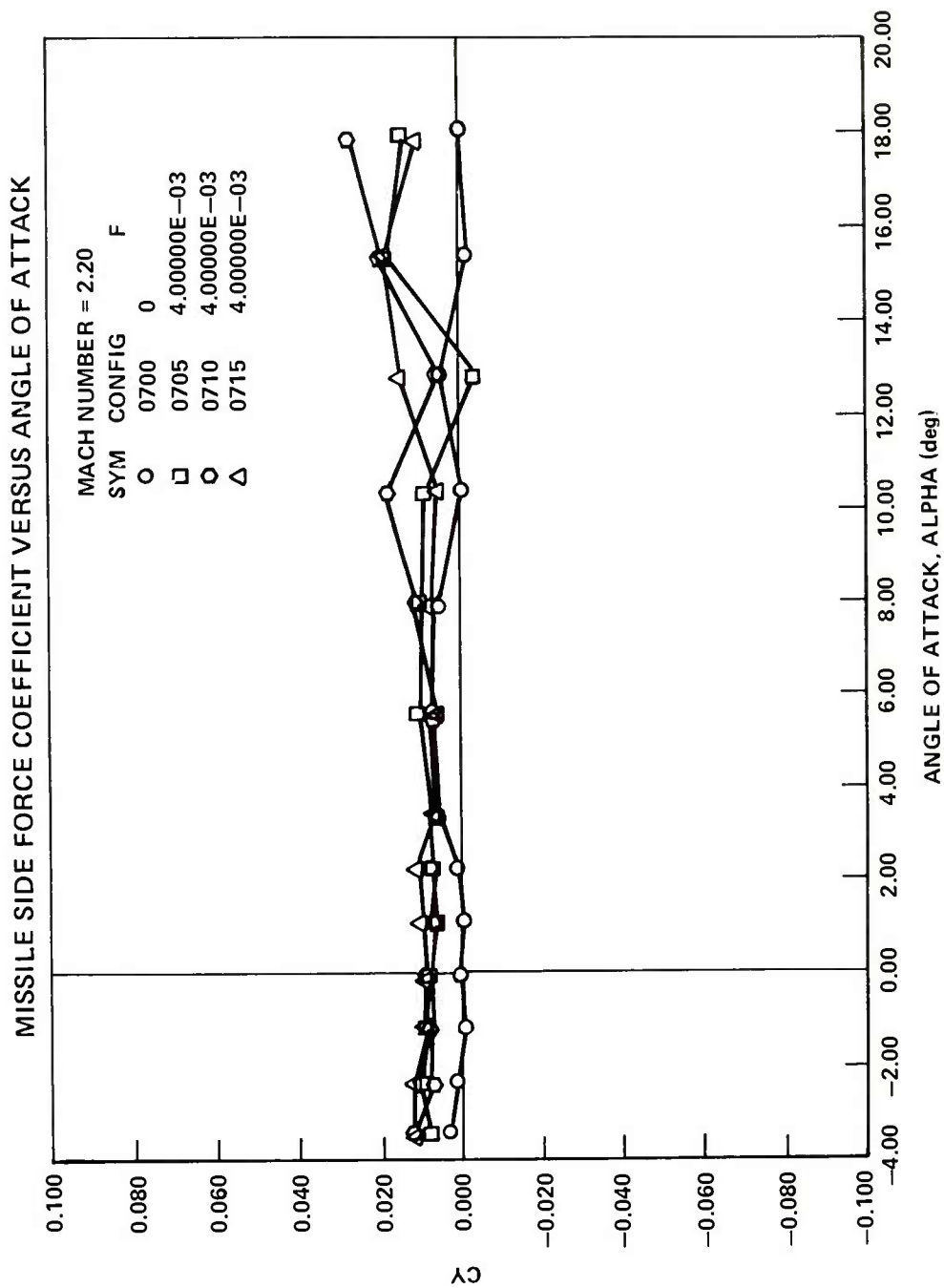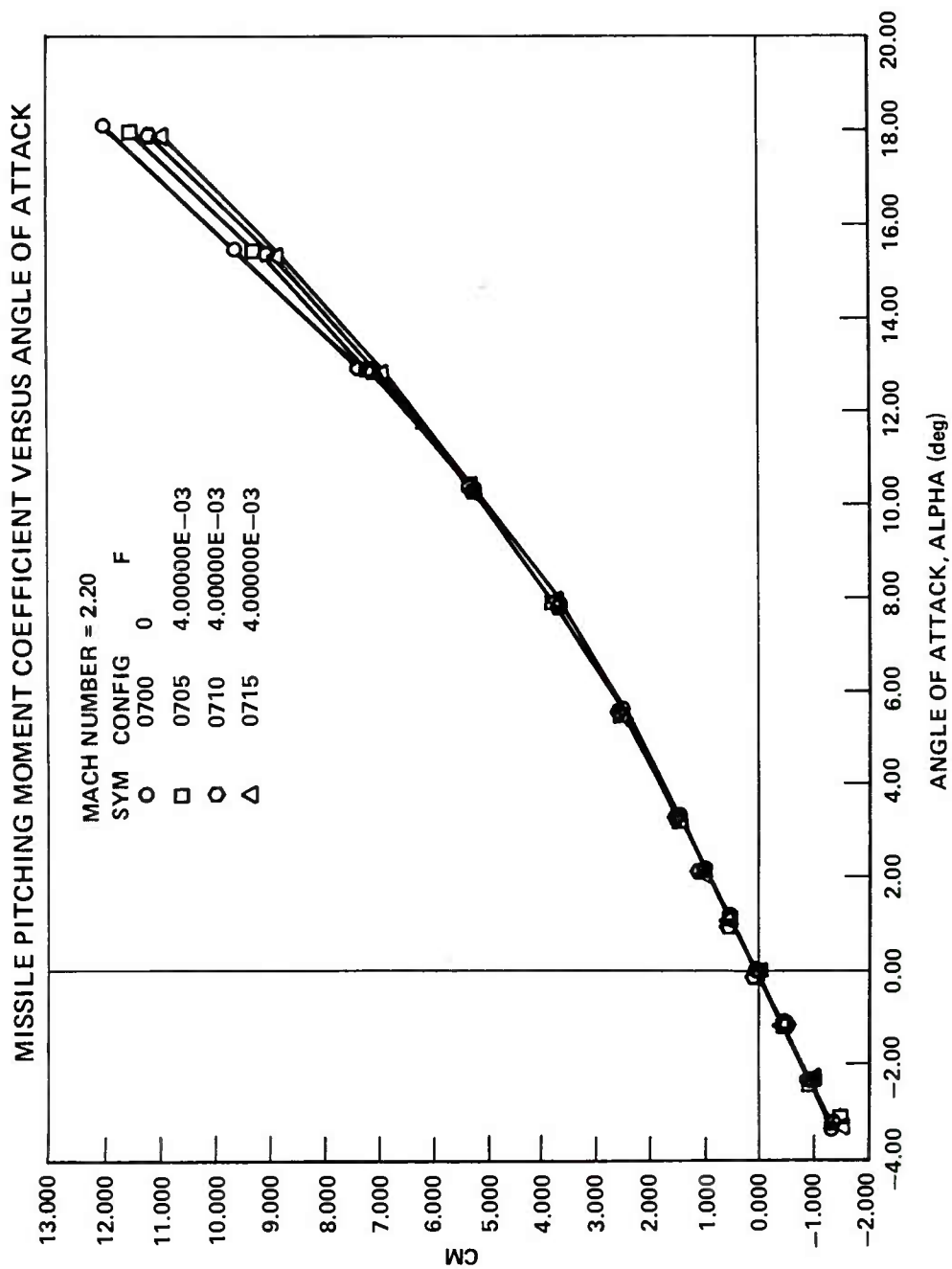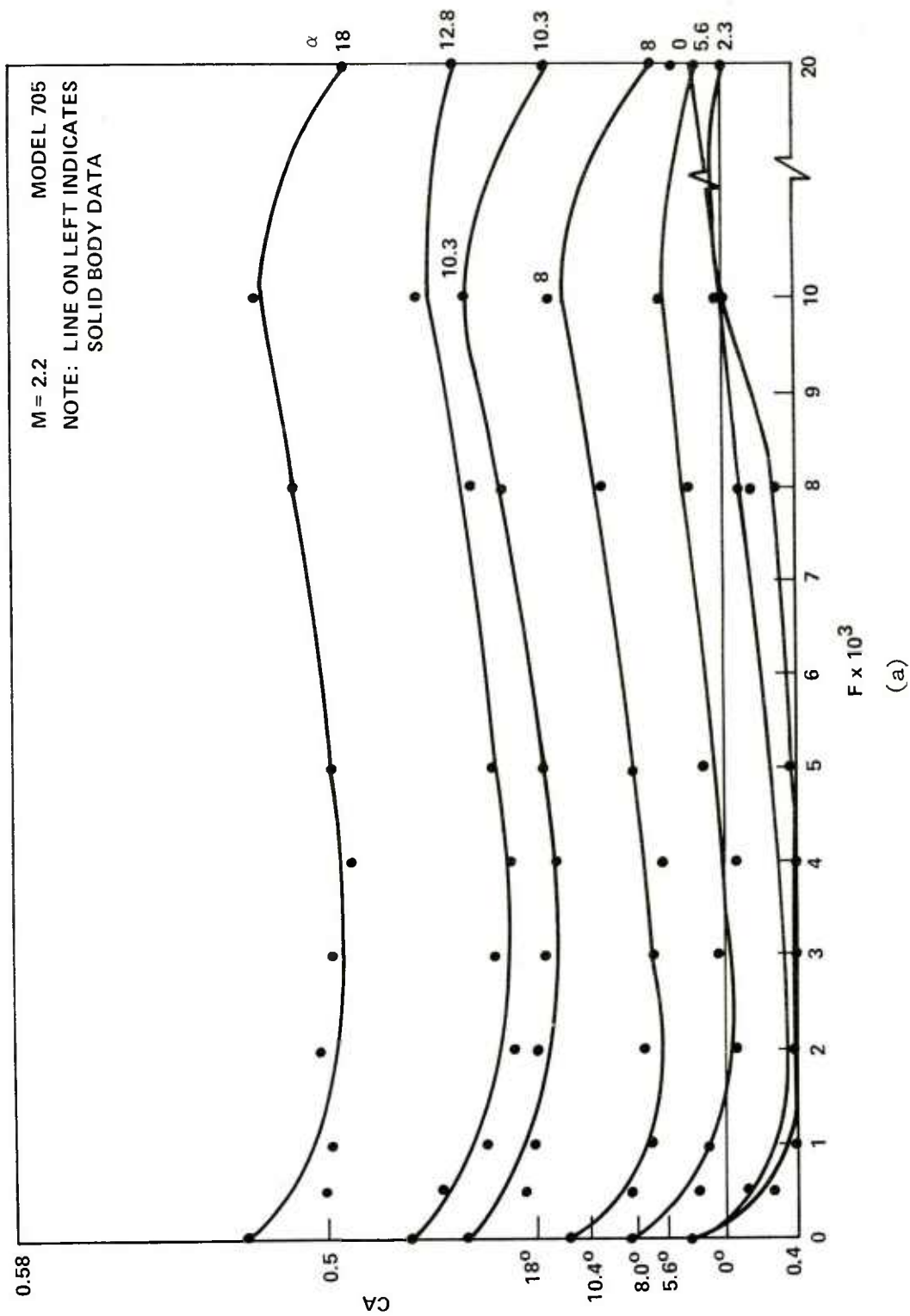
Figure 3. (Concluded).

Figure 4. Missile total axial force coefficient versus mass flow rate.

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Figure 4. (Continued).

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F = 0.0004

F = 0.02

α = 0°

F = 0.0000

F = 0.008

(a)
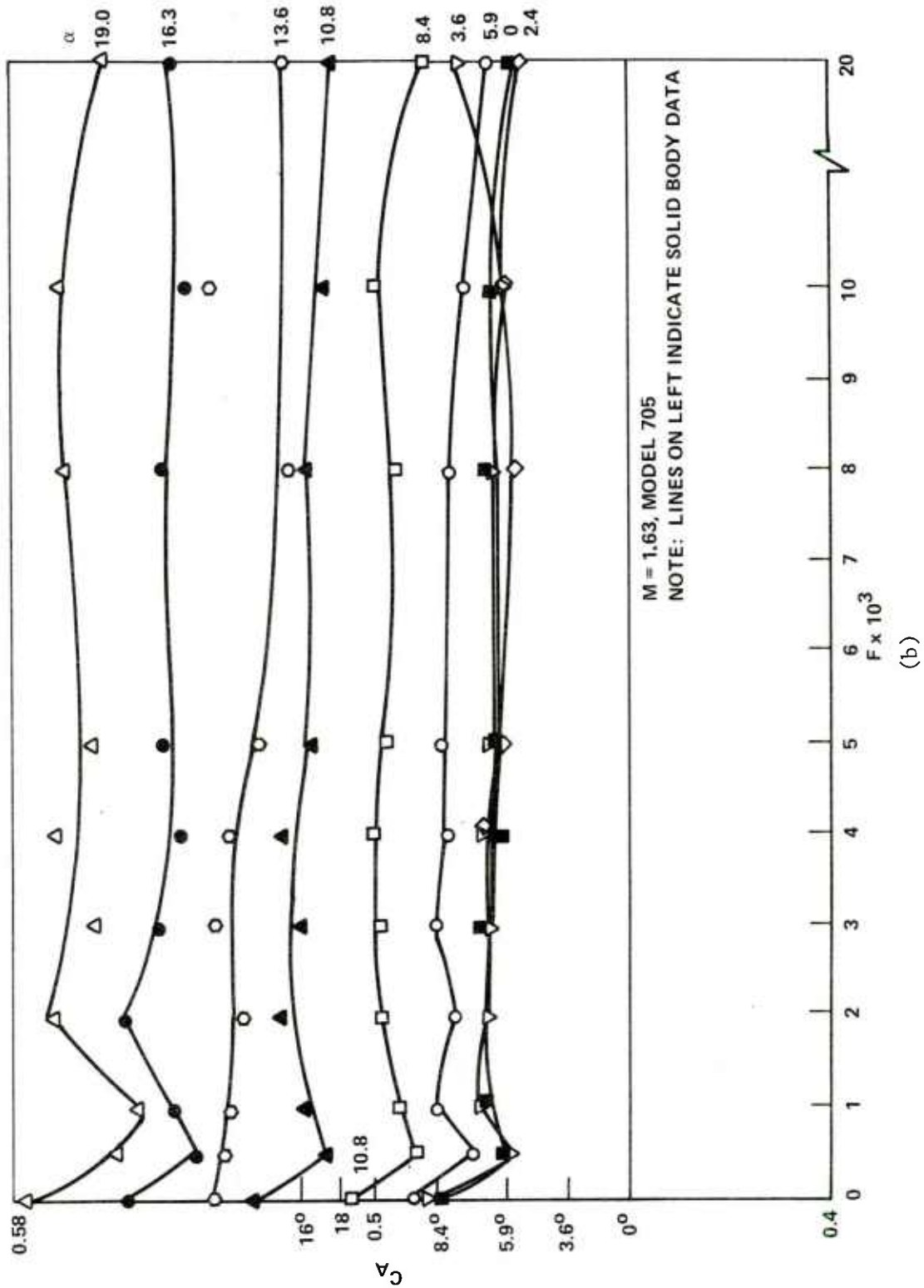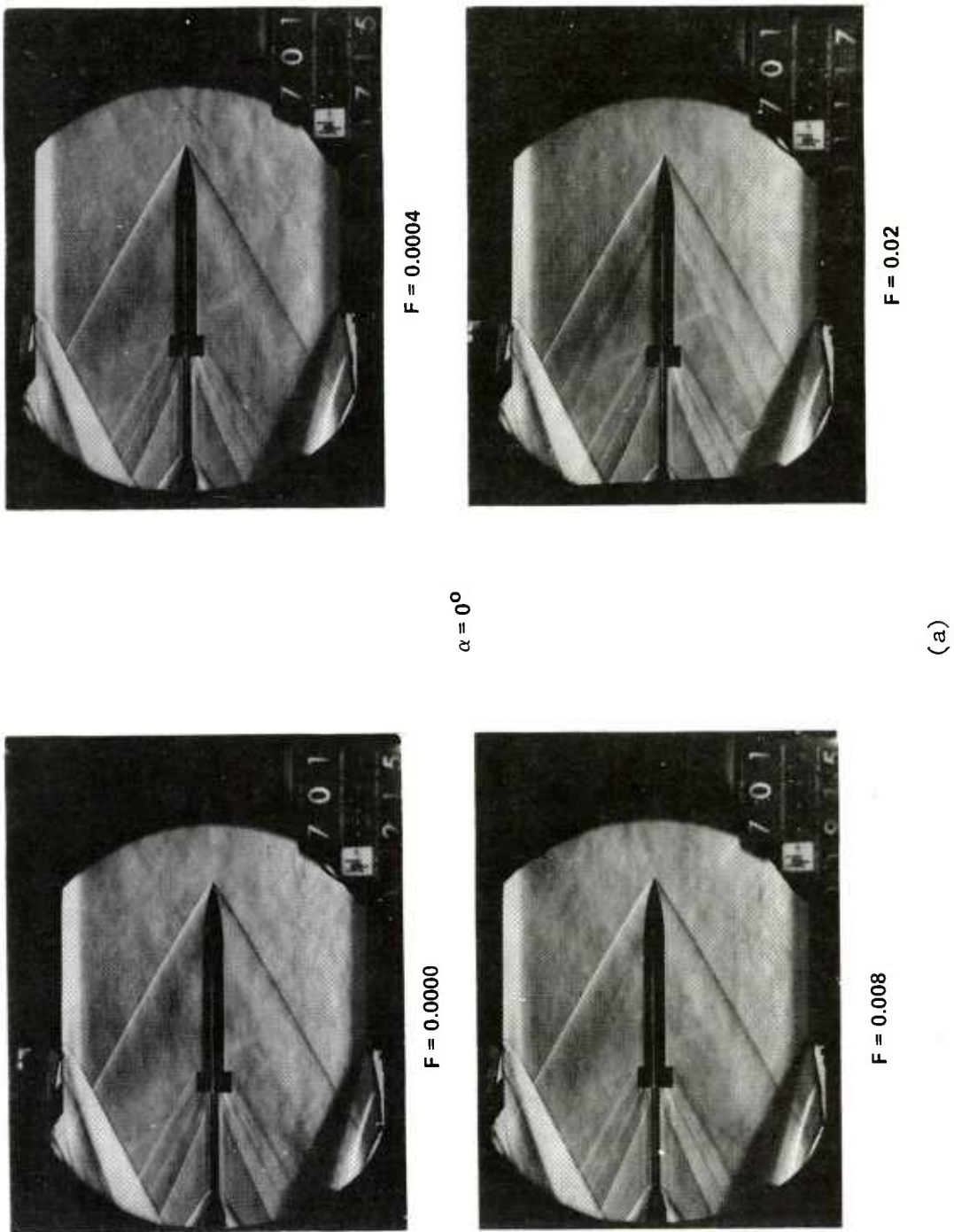
Figure 5. Schlieren photographs, configuration 705.

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F = 0.0004

F = 0.02

α = 18°
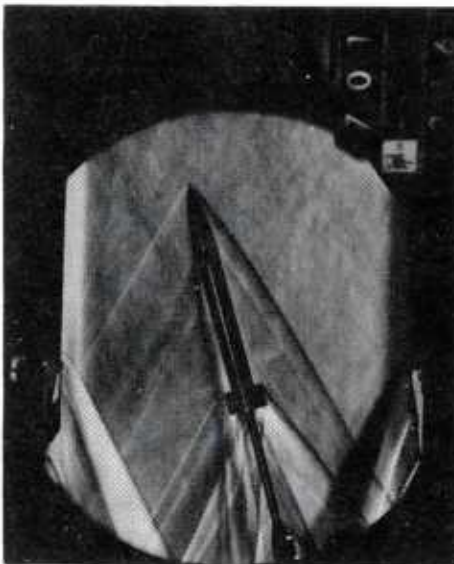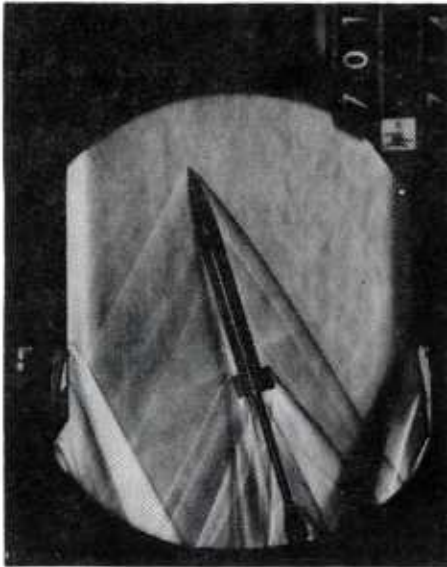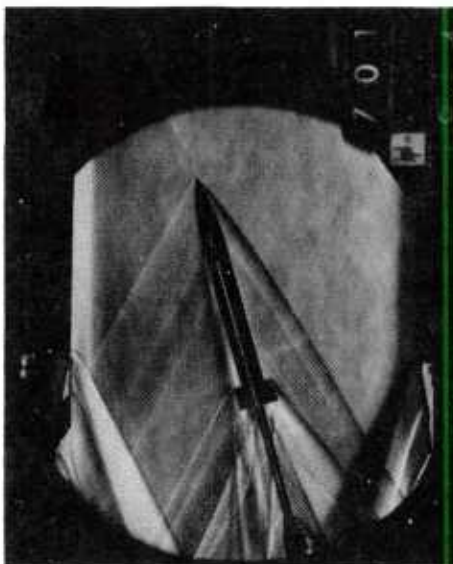
F = 0.0000

F = 0.008
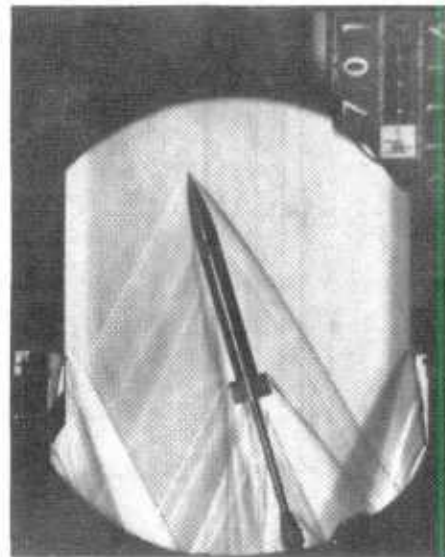
(b)

Figure 5. (Concluded).

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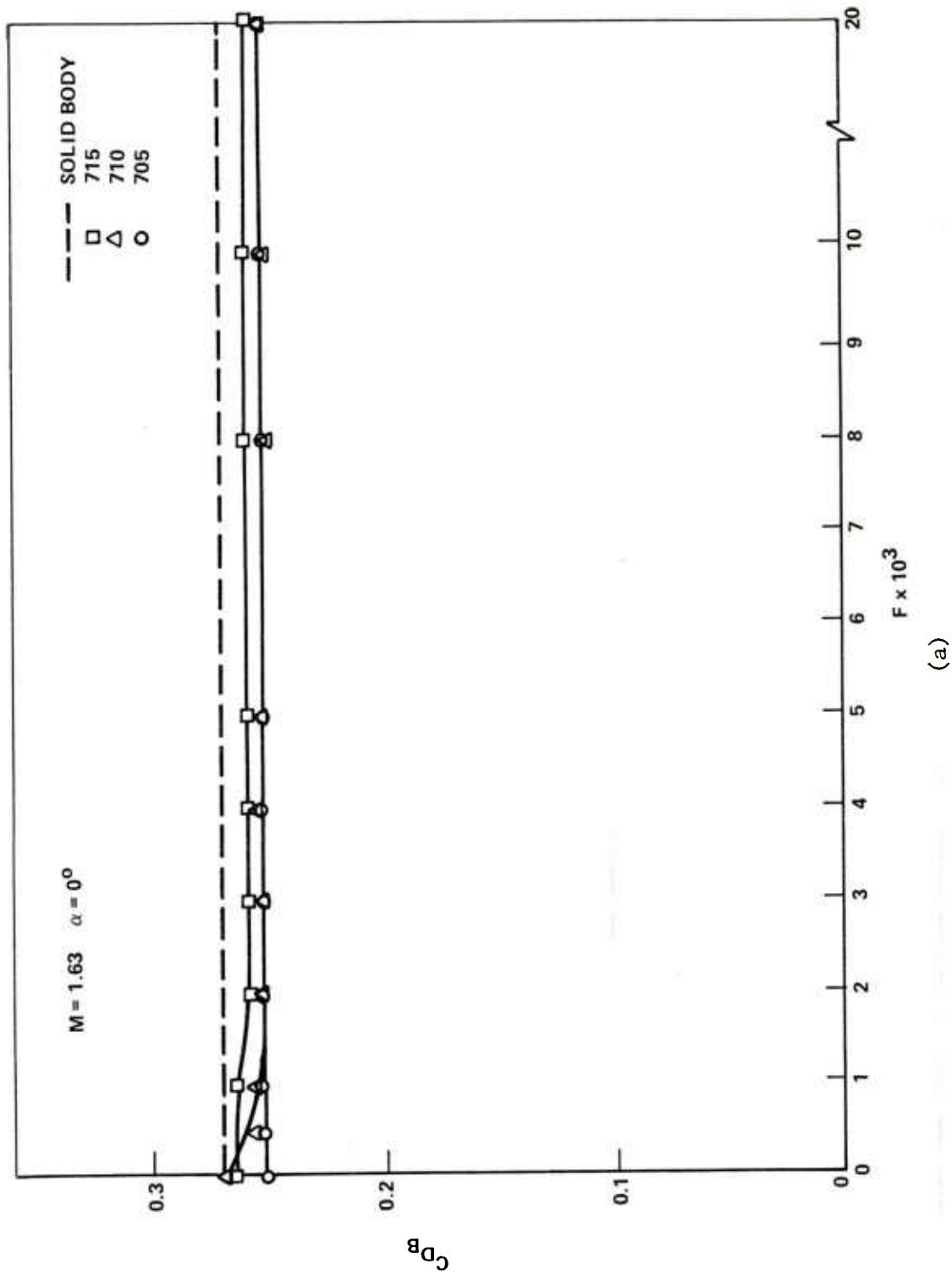
Figure 6. Base drag coefficient versus mass flow rate $M = 1.63 \ \alpha = 0°$.

(a)
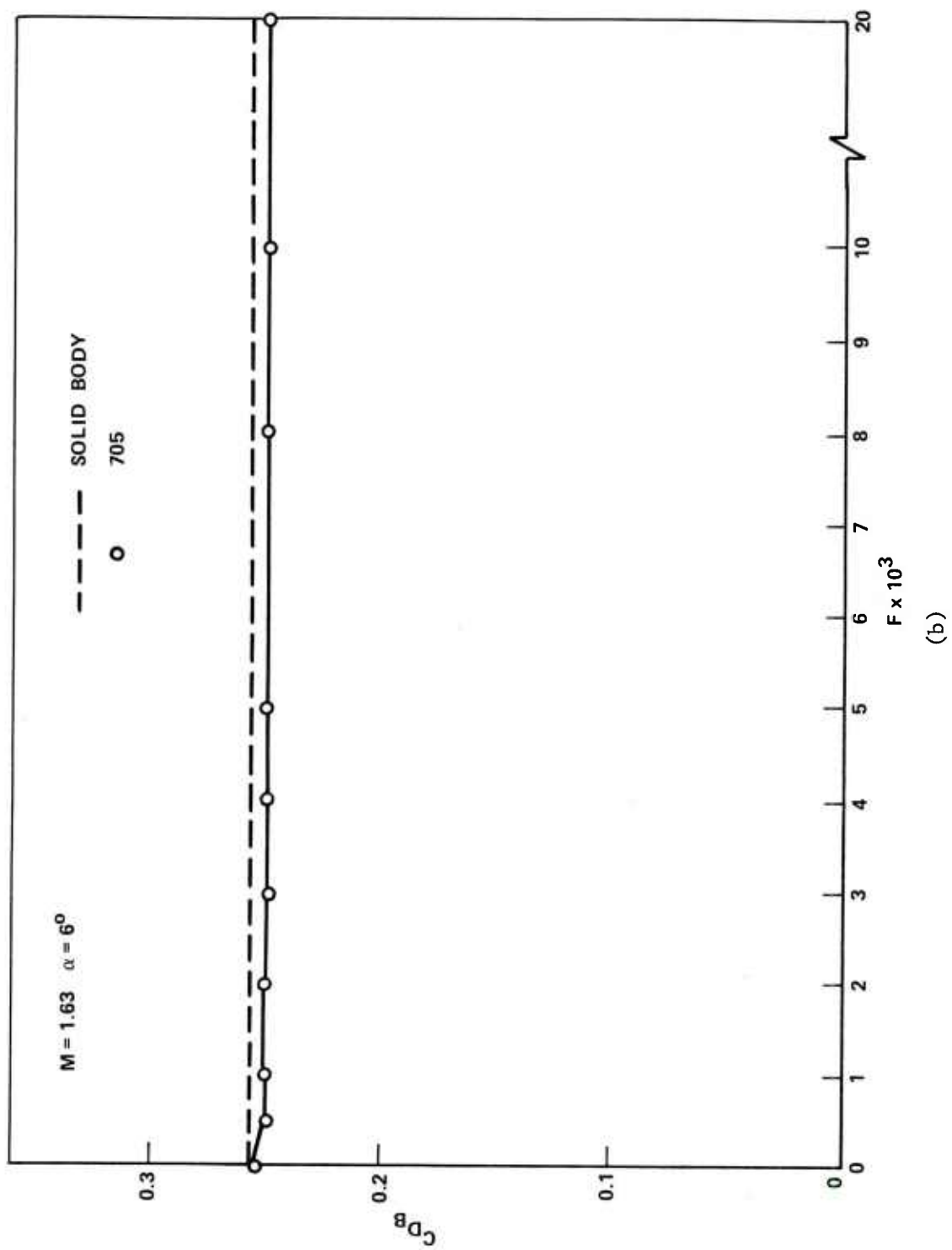
Figure 6. (Concluded).

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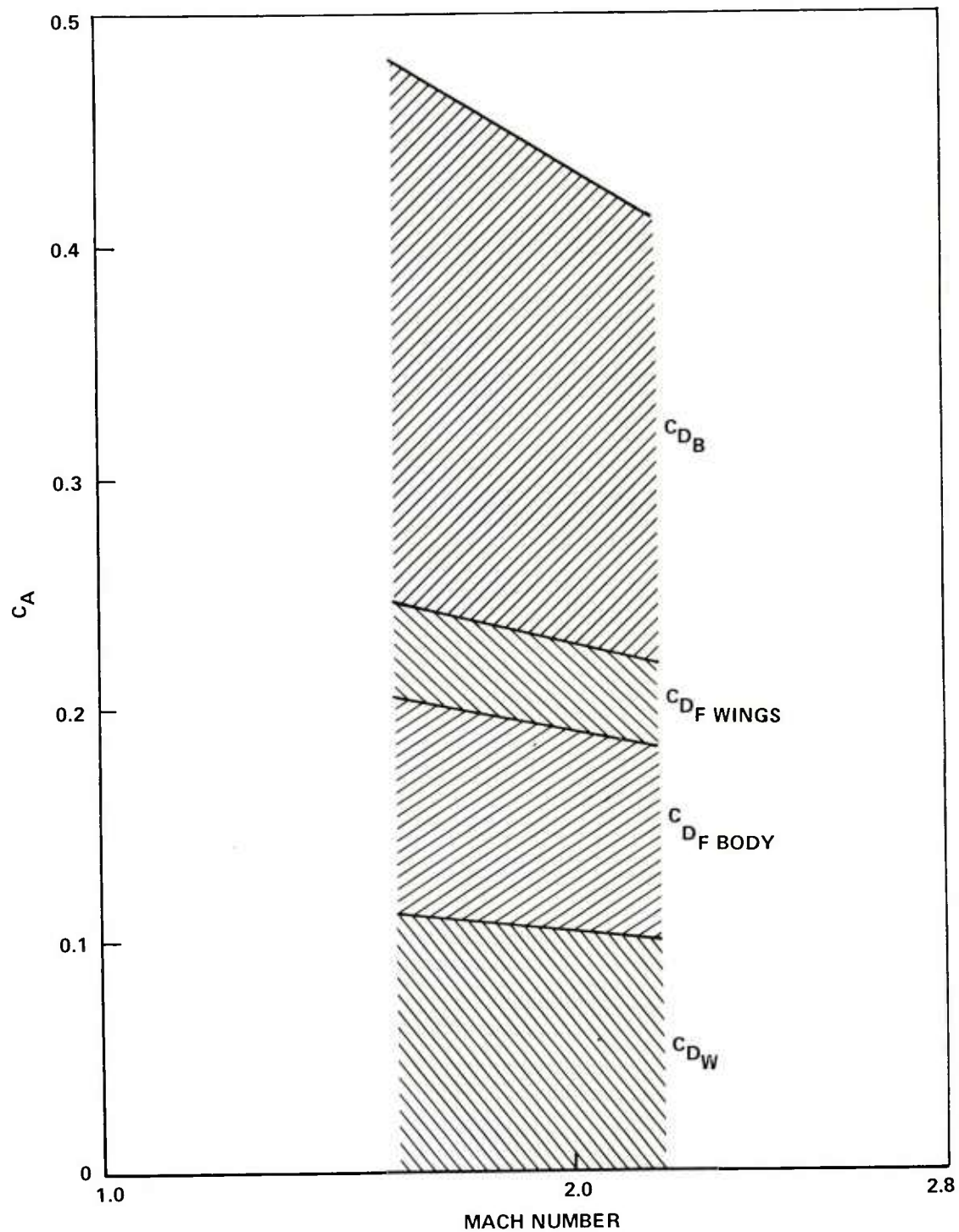
Figure 7.   Theoretical C_A estimates for mach 1.63 and 2.2.

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Appendix. TABULATED DATA

CONFIG =0700
RUN NO. = 1
MACH NO. = 2.2
DYN PRESS. = 4.46
REYNOLDS NO. = 257006
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0240	0.0172	0.0006	0.4178	0.0481	0.0121	-0.0002	0.0000
-3.3352	-0.3886	0.0030	0.4106	-1.3416	0.0105	-0.0016	0.0000
-2.2030	-0.2543	0.0012	0.4115	-0.8776	0.0061	-0.0017	0.0000
-1.0772	-0.1170	-0.0006	0.4146	-0.4060	0.0097	-0.0022	0.0000
0.0305	0.0135	0.0007	0.4138	0.0350	0.0123	-0.0013	0.0000
1.1862	0.1625	-0.0005	0.4158	0.5458	0.0043	-0.0014	0.0000
2.3111	0.3010	0.0012	0.4127	1.0136	0.0039	-0.0011	0.0000
3.4063	0.4393	0.0056	0.4166	1.4838	0.0195	-0.0018	0.0000
5.7028	0.7423	0.0070	0.4280	2.5269	0.0197	-0.0034	0.0000
7.9638	1.0789	0.0055	0.4341	3.7103	0.0209	-0.0060	0.0000
10.4597	1.5238	-0.0002	0.4463	5.3707	0.0016	-0.0056	0.0000
12.9363	2.0323	0.0050	0.4428	7.3945	0.0179	-0.0022	0.0000
15.4581	2.5919	-0.0011	0.4501	9.6500	0.0069	-0.0052	0.0000
18.0993	3.1815	0.0007	0.4564	12.0316	0.0186	-0.0040	0.0000
0.0436	0.0277	-0.0010	0.4155	0.0841	0.0053	-0.0018	0.0000

CONFIG =0705
RUN NO. = 2
MACH NO. = 2.2
DYN PRESS = 4.45
REYNOLDS NO. = 257841
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0250	0.0147	0.0066	0.4208	0.0604	0.0331	-0.0010	0.0000
-3.3466	-0.3969	0.0073	0.4270	-1.3246	0.0325	-0.0011	0.0000
-2.2459	-0.2636	0.0078	0.4210	-0.8780	0.0367	-0.0007	0.0000
-1.0873	-0.1202	0.0068	0.4196	-0.3986	0.0340	-0.0003	0.0000
0.0351	0.0163	0.0066	0.4192	0.0574	0.0332	-0.0017	0.0000
1.1883	0.1651	0.0072	0.4186	0.5547	0.0357	-0.0019	0.0000
2.2897	0.3013	0.0049	0.4182	1.0088	0.0303	-0.0032	0.0000
3.4124	0.4388	0.0041	0.4224	1.4668	0.0313	-0.0018	0.0000
5.6945	0.7497	0.0033	0.4345	2.5203	0.0267	-0.0041	0.0000
7.9798	1.1059	0.0048	0.4489	3.7657	0.0326	-0.0068	0.0000
10.4092	1.5290	0.0048	0.4711	5.3030	0.0332	-0.0104	0.0000
12.8482	2.0008	-0.0066	0.4811	7.0980	-0.0127	-0.0039	0.0000
15.3968	2.5357	0.0059	0.4969	9.1998	0.0280	-0.0062	0.0000
18.0109	3.1293	0.0143	0.5172	11.5159	0.0667	-0.0121	0.0000
0.0079	0.0209	0.0066	0.4211	0.0641	0.0316	-0.0007	0.0000

CONFIG =0705
RUN NO. = 3
MACH NO. = 2.2
DYN PRESS. = 4.46
REYNOLDS NO. = 256992
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0020	0.0141	0.0067	0.4058	0.0429	0.0286	-0.0018	0.0005
-3.3445	-0.3902	0.0090	0.4116	-1.3339	0.0332	-0.0014	0.0005
-2.2451	-0.2585	0.0087	0.4076	-0.8828	0.0338	-0.0015	0.0005
-1.1314	-0.1223	0.0062	0.4032	-0.4195	0.0247	-0.0022	0.0005
0.0136	0.0156	0.0074	0.4067	0.0493	0.0301	-0.0017	0.0005
1.1113	0.1566	0.0073	0.4047	0.5294	0.0310	-0.0019	0.0005
2.2926	0.3020	0.0064	0.4056	1.0207	0.0300	-0.0014	0.0005
3.4009	0.4330	0.0051	0.4093	1.4642	0.0253	-0.0024	0.0005
5.6871	0.7462	0.0077	0.4215	2.5450	0.0358	-0.0031	0.0005
7.9770	1.1015	0.0113	0.4355	3.8053	0.0477	-0.0062	0.0005
10.3969	1.5222	0.0134	0.4582	5.3564	0.0512	-0.0068	0.0005
12.9023	2.0092	-0.0005	0.4762	7.2322	-0.0022	-0.0028	0.0005
15.3754	2.5260	0.0144	0.4830	9.2781	0.0634	-0.0105	0.0005
17.9717	3.1105	0.0272	0.5004	11.5664	0.1154	-0.0158	0.0005
0.0191	0.0209	0.0058	0.4110	0.0722	0.0234	-0.0023	0.0005

CONFIG = 0705
RUN NO. = 4
MACH NO. = 2.2
DYN PRESS. = 4.46
REYNOLDS NO. = 256713
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0183	0.0201	0.0081	0.4026	0.0689	0.0316	-0.0022	0.0010
-3.3946	-0.3902	0.0097	0.4096	-1.3339	0.0348	-0.0009	0.0010
-2.2572	-0.2608	0.0102	0.4023	-0.8910	0.0388	-0.0015	0.0010
-1.0998	-0.1208	0.0077	0.4030	-0.4130	0.0295	-0.0016	0.0010
0.0130	0.0141	0.0074	0.4034	0.0492	0.0301	-0.0017	0.0010
1.1337	0.1586	0.0088	0.4063	0.5384	0.0373	-0.0018	0.0010
2.2933	0.3011	0.0064	0.3999	1.0227	0.0298	-0.0019	0.0010
3.3743	0.4353	0.0058	0.4067	1.4767	0.0283	-0.0018	0.0010
5.6786	0.7459	0.0076	0.4194	2.5495	0.0356	-0.0031	0.0010
7.9688	1.1029	0.0105	0.4310	3.8134	0.0443	-0.0062	0.0010
10.3862	1.5216	0.0059	0.4566	5.3535	0.0363	-0.0061	0.0010
12.8744	2.0002	-0.0027	0.4663	7.2031	-0.0086	-0.0028	0.0010
15.3685	2.5289	0.0136	0.4763	9.2911	0.0568	-0.0116	0.0010
17.9621	3.1099	0.0182	0.4966	11.5701	0.0776	-0.0136	0.0010
0.0067	0.0186	0.0081	0.4075	0.0623	0.0316	-0.0006	0.0010

CONFIG = 0705
RUN NO. = 5
MACH NO. = 2.2
DYN PRESS. = 4.46
REYNOLDS NO. = 256323
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0051	0.0171	0.0066	0.4019	0.0559	0.0285	-0.0028	0.0020
-3.3435	-0.3877	0.0097	0.4051	-1.3270	0.0348	-0.0026	0.0020
-2.2429	-0.2555	0.0095	0.4023	-0.8762	0.0355	-0.0021	0.0020
-1.1182	-0.1186	0.0077	0.4024	-0.4081	0.0328	-0.0021	0.0020
0.0009	0.0126	0.0074	0.4035	0.0395	0.0319	-0.0028	0.0020
1.1038	0.1596	0.0065	0.4002	0.5377	0.0293	-0.0018	0.0020
2.2839	0.3035	0.0064	0.3995	1.0257	0.0300	-0.0014	0.0020
3.4226	0.4457	0.0035	0.3986	1.5083	0.0216	-0.0023	0.0020
5.6534	0.7418	0.0062	0.4133	2.5321	0.0294	-0.0031	0.0020
8.0181	1.1135	0.0082	0.4330	3.8476	0.0375	-0.0062	0.0020
10.3713	1.5172	0.0037	0.4537	5.3327	0.0219	-0.0068	0.0020
12.8714	1.9988	-0.0018	0.4610	7.1872	-0.0050	-0.0029	0.0020
15.3527	2.5246	0.0160	0.4763	9.2640	0.0686	-0.0094	0.0020
17.9581	3.1076	0.0288	0.5027	11.5503	0.1238	-0.0158	0.0020
0.0316	0.0247	0.0051	0.4048	0.0791	0.0217	-0.0006	0.0020

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RUN NO. = 6
MACH NO. = 2.2
DYN PRESS. = 4.46
REYNOLDS NO. = 256325
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0200	0.0232	0.0081	0.4019	0.0723	0.0349	-0.0028	0.0030
-3.3329	-0.3871	0.0082	0.4039	-1.3304	0.0317	-0.0026	0.0030
-2.2436	-0.2551	0.0087	0.3972	-0.8796	0.0339	-0.0010	0.0030
-1.1418	-0.1214	0.0085	0.4012	-0.4238	0.0347	-0.0028	0.0030
0.0134	0.0164	0.0067	0.3991	0.0462	0.0286	-0.0023	0.0030
1.1352	0.1619	0.0066	0.4008	0.5411	0.0293	-0.0019	0.0030
2.2486	0.2982	0.0042	0.3975	1.0045	0.0221	-0.0031	0.0030
3.4434	0.4466	0.0050	0.4025	1.5079	0.0281	-0.0023	0.0030
5.6540	0.7423	0.0077	0.4165	2.5287	0.0359	-0.0032	0.0030
7.9890	1.1046	0.0076	0.4308	3.8106	0.0346	-0.0051	0.0030
10.3829	1.5194	0.0097	0.4536	5.3374	0.0464	-0.0062	0.0030
12.8468	1.9945	-0.0078	0.4642	7.1681	-0.0245	-0.0024	0.0030
15.3535	2.5130	0.0191	0.4756	9.2124	0.0789	-0.0107	0.0030
17.9723	3.1045	0.0212	0.4983	11.5325	0.0907	-0.0125	0.0030
0.0213	0.0247	0.0066	0.4065	0.0773	0.0283	-0.0023	0.0030

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CONFIG =0705
RUN NO. = 7
MACH NO. = 2.2
DYN PRESS. = 4.46
REYNOLDS NO. = 255981
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0190	0.0225	0.0089	0.4041	0.0675	0.0366	-0.0006	0.0040
-3.3423	-0.3864	0.0082	0.4062	-1.3287	0.0300	-0.0009	0.0040
-2.2758	-0.2581	0.0103	0.4023	-0.8903	0.0390	-0.0010	0.0040
-1.1165	-0.1155	0.0092	0.4024	-0.4047	0.0361	-0.0017	0.0040
0.0142	0.0172	0.0074	0.4003	0.0496	0.0319	-0.0012	0.0040
1.1252	0.1621	0.0066	0.4006	0.5419	0.0310	-0.0019	0.0040
2.2508	0.3001	0.0072	0.3992	1.0113	0.0334	-0.0014	0.0040
3.4118	0.4458	0.0073	0.4002	1.5034	0.0348	-0.0023	0.0040
5.6319	0.7411	0.0100	0.4134	2.5240	0.0443	-0.0031	0.0040
8.0274	1.1135	0.0098	0.4291	3.8428	0.0442	-0.0067	0.0040
10.3611	1.5159	0.0090	0.4516	5.3221	0.0433	-0.0074	0.0040
12.8694	1.9974	-0.0033	0.4611	7.1777	-0.0130	-0.0018	0.0040
15.3987	2.5313	0.0182	0.4791	9.2864	0.0767	-0.0111	0.0040
17.9456	3.1065	0.0146	0.4899	11.5370	0.0667	-0.0127	0.0040
0.0405	0.0240	0.0066	0.4025	0.0741	0.0284	-0.0023	0.0040

CONFIG =0705
RUN NO. = 8
MACH NO. = 2.2
DYN PRESS. = 4.46
REYNOLDS NO. = 256027
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0305	0.0240	0.0074	0.4048	0.0741	0.0333	-0.0017	0.0050
-3.3744	-0.3886	0.0090	0.4034	-1.3369	0.0350	-0.0015	0.0050
-2.2523	-0.2543	0.0102	0.4029	-0.8772	0.0388	-0.0005	0.0050
-1.1278	-0.1170	0.0084	0.4040	-0.4095	0.0345	-0.0011	0.0050
0.0042	0.0172	0.0074	0.4050	0.0495	0.0319	-0.0012	0.0050
1.1252	0.1614	0.0080	0.4021	0.5396	0.0341	-0.0013	0.0050
2.2513	0.3008	0.0072	0.4007	1.0129	0.0350	-0.0014	0.0050
3.3865	0.4397	0.0058	0.4080	1.4838	0.0285	-0.0030	0.0050
5.6788	0.7485	0.0069	0.4201	2.5501	0.0326	-0.0032	0.0050
8.0272	1.1135	0.0083	0.4353	3.8413	0.0377	-0.0074	0.0050
10.3655	1.5132	0.0090	0.4543	5.3171	0.0402	-0.0069	0.0050
12.8675	1.9951	-0.0018	0.4648	7.1710	-0.0048	-0.0029	0.0050
15.3809	2.5239	0.0175	0.4799	9.2542	0.0738	-0.0107	0.0050
17.9556	3.1062	0.0258	0.4981	11.5377	0.1142	-0.0170	0.0050
0.0453	0.0292	0.0073	0.4073	0.0920	0.0314	-0.0012	0.0050

CONFIG =0705
RUN NO. = 9
MACH NO. = 2.2
DYN PRESS. = 4.46
REYNOLDS NO. = 255988
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0311	0.0247	0.0074	0.4117	0.0757	0.0300	-0.0012	0.0080
-3.3865	-0.3909	0.0090	0.4126	-1.3451	0.0350	-0.0004	0.0080
-2.2433	-0.2550	0.0072	0.4074	-0.8819	0.0307	-0.0005	0.0080
-1.1191	-0.1185	0.0092	0.4100	-0.4145	0.0362	-0.0006	0.0080
0.0026	0.0157	0.0067	0.4096	0.0429	0.0287	-0.0024	0.0080
1.1004	0.1566	0.0058	0.4094	0.5231	0.0278	-0.0019	0.0080
2.2196	0.2884	0.0050	0.4044	0.9701	0.0256	-0.0021	0.0080
3.4326	0.4459	0.0065	0.4102	1.5045	0.0315	-0.0030	0.0080
5.6887	0.7485	0.0084	0.4230	2.5500	0.0375	-0.0026	0.0080
8.0272	1.1135	0.0082	0.4421	3.8413	0.0377	-0.0063	0.0080
10.4055	1.5224	0.0082	0.4627	5.3472	0.0366	-0.0063	0.0080
12.8689	1.9947	-0.0018	0.4696	7.1647	-0.0080	-0.0019	0.0080
15.4240	2.5338	0.0151	0.4890	9.2931	0.0650	-0.0117	0.0080
17.9441	3.1055	0.0296	0.5066	11.5296	0.1275	-0.0165	0.0080
0.0234	0.0269	0.0066	0.4186	0.0855	0.0282	-0.0012	0.0080

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                        CONFIG =0705
                        RUN NO.  = 10
                        MACH NO. = 2.2
                        DYN PRESS.= 4.45
                        REYNOLDS NO. = 255501
                        REFERENCE AREA = 1.4849

   ALPHA       CN        CY        CA        CM        CLN       CLL        F
   0.0100    0.0232    0.0066    0.4149    0.0723    0.0300   -0.0023    0.0100
  -3.3417   -0.3856    0.0097    0.4153   -1.3270    0.0381    0.0002    0.0100
  -2.2639   -0.2558    0.0072    0.4167   -0.8837    0.0307   -0.0011    0.0100
  -1.1171   -0.1163    0.0092    0.4192   -0.4064    0.0377   -0.0017    0.0100
   0.0141    0.0171    0.0074    0.4164    0.0494    0.0319   -0.0024    0.0100
   1.1467    0.1634    0.0058    0.4145    0.5476    0.0276   -0.0019    0.0100
   2.2184    0.2869    0.0065    0.4166    0.9666    0.0322   -0.0032    0.0100
   3.4222    0.4456    0.0080    0.4230    1.5063    0.0380   -0.0035    0.0100
   5.6782    0.7478    0.0069    0.4284    2.5483    0.0342   -0.0037    0.0100
   8.0403    1.1172    0.0075    0.4520    3.8525    0.0360   -0.0086    0.0100
  10.3792    1.5177    0.0060    0.4711    5.3301    0.0319   -0.0075    0.0100
  12.8919    2.0003   -0.0026    0.4754    7.1872   -0.0082   -0.0036    0.0100
  15.4343    2.5381    0.0144    0.4881    9.3060    0.0618   -0.0106    0.0100
  17.9644    3.1063    0.0289    0.5141   11.5296    0.1242   -0.0160    0.0100
   0.0326    0.0262    0.0066    0.4232    0.0821    0.0283   -0.0024    0.0100


                        CONFIG =0705
                        RUN NO.  = 11
                        MACH NO. = 2.2
                        DYN PRESS.= 4.46
                        REYNOLDS NO. = 256816
                        REFERENCE AREA = 1.4849

   ALPHA       CN        CY        CA        CM        CLN       CLL        F
   0.0004    0.0111    0.0036    0.4219    0.0397    0.0186    0.0010    0.0200
  -3.3243   -0.3921    0.0066    0.4139   -1.3244    0.0294    0.0026    0.0200
  -2.2503   -0.2665    0.0049    0.4166   -0.8990    0.0223    0.0019    0.0200
  -1.1252   -0.1275    0.0047    0.4179   -0.4306    0.0245    0.0012    0.0200
   0.0172    0.0081    0.0029    0.4160    0.0266    0.0170    0.0015    0.0200
   1.1383    0.1537    0.0028    0.4184    0.5168    0.0163    0.0003    0.0200
   2.2396    0.2773    0.0028    0.4166    0.9329    0.0160    0.0000    0.0200
   3.4221    0.4357    0.0021    0.4180    1.4618    0.0139   -0.0004    0.0200
   5.6647    0.7372    0.0034    0.4203    2.4871    0.0187   -0.0007    0.0200
   8.0073    1.0989    0.0034    0.4302    3.7489    0.0161   -0.0017    0.0200
  10.3760    1.5103    0.0034    0.4532    5.2508    0.0186   -0.0041    0.0200
  12.8574    1.9838    0.0039    0.4628    7.0698    0.0200   -0.0051    0.0200
  15.3642    2.5046    0.0030    0.4804    9.1091    0.0170   -0.0053    0.0200
  17.9533    3.0780    0.0032    0.4963   11.3467    0.0249   -0.0051    0.0200
   0.0326    0.0149    0.0029    0.4247    0.0447    0.0186    0.0004    0.0200


                        CONFIG =0705
                        RUN NO.  = 12
                        MACH NO. = 2.2
                        DYN PRESS.= 4.46
                        REYNOLDS NO. = 256291
                        REFERENCE AREA = 1.4849

   ALPHA       CN        CY        CA        CM        CLN       CLL        F
   0.0344    0.0172    0.0043    0.4318    0.0511    0.0251    0.0004    0.0000
  -3.3912   -0.3958    0.0052    0.4342   -1.3600    0.0251    0.0022    0.0000
  -2.2455   -0.2581    0.0049    0.4304   -0.8888    0.0241    0.0011    0.0000
  -1.1418   -0.1216    0.0054    0.4331   -0.4244    0.0263    0.0010    0.0000
  -0.0009    0.0119    9.0052    0.4341    0.0299    0.0270    0.0003    0.0000
   1.1226    0.1589    0.0050    0.4338    0.5315    0.0276    0.0008    0.0000
   2.2418    0.2904    0.0042    0.4359    0.9773    0.0253    0.0006    0.0000
   3.3972    0.4407    0.0035    0.4370    1.4862    0.0233    0.0003    0.0000
   5.6759    0.7458    0.0054    0.4560    2.5381    0.0293   -0.0011    0.0000
   8.0229    1.1095    0.0060    0.4659    3.8235    0.0312   -0.0030    0.0000
  10.3755    1.5125    0.0090    0.4858    5.3069    0.0500   -0.0057    0.0000
  12.8704    1.9967    0.0072    0.4941    7.1697    0.0411   -0.0066    0.0000
  15.3986    2.5296    0.0166    0.5137    9.2693    0.0783   -0.0099    0.0000
  17.9416    3.1037    0.0251    0.5266   11.5179    0.1179   -0.0173    0.0000
   0.0055    0.0187    0.0036    0.4371    0.0546    0.0218    0.0014    0.0000
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                         CONFIG =0710
                         RUN NO. = 13
                         MACH NO. = 2.2
                         DYN PRESS.= 4.47
                         REYNOLDS NO. = 255040
                         REFERENCE AREA = 1.4849

   ALPHA       CN        CY        CA        CM        CLN       CLL        F
   0.0075    0.0193    0.0073    0.4352    0.0654    0.0298   -0.0002    0 0000
  -3.3840   -0.3886    0.0103    0.4370   -1.3252    0.0394   -0.0004    0.0000
  -2.2450   -0.2582    0.0071    0.4324   -0.8815    0.0304   -0.0011    0.0000
  -1.1087   -0.1190    0.0068    0.4319   -0.4087    0.0293   -0.0012    0.0000
   0.0362    0.0185    0.0088    0.4335    0.0589    0.0364   -0.0002    0.0000
   1.1485    0.1643    0.0072    0.4339    0.5540    0.0322   -0.0014    0.0000
   2.2450    0.2928    0.0056    0.4366    0.9899    0.0284   -0.0016    0.0000
   3.4263    0.4489    0.0064    0.4453    1.5170    0.0279    0.0002    0.0000
   5.7082    0.7585    0.0046    0.4612    2.5744    0.0160   -0.0013    0.0000
   8.0510    1.1286    0.0074    0.4792    3.8756    0.0357   -0.0054    0.0000
  10.4171    1.5336    0.0148    0.5065    5.3573    0.0739   -0.0086    0.0000
  12.8686    2.0033    0.0089    0.5183    7.1255    0.0486   -0.0057    0.0000
  15.3681    2.5169    0.0189    0.5333    9.0837    0.0898   -0.0114    0.0000
  17.9157    3.0815    0.0290    0.5605   11.2640    0.1359   -0.0109    0.0000
   0.0081    0.0209    0.0058    0.4336    0.0657    0.0281    0.0015    0.0000


                         CONFIG =0710
                         RUN NO. = 14
                         MACH NO. = 2.2
                         DYN PRESS.= 4.46
                         REYNOLDS NO. = 254808
                         REFERENCE AREA = 1.4849

   ALPHA       CN        CY        CA        CM        CLN       CLL        F
   0.0071    0.0209    0.0059    0.4259    0.0594    0 0267    0 0003    0 0005
  -3.3077   -0.3813    0.0081    0.4257   -1.3087    0.0345   -0.0004    0 0005
  -2.2746   -0.2558    0.0072    0.4227   -0.8844    0.0322    0 0000    0 0005
  -1.1488   -0.1174    0.0069    0.4230   -0.4132    0.0311   -0 0007    0 0005
   0.0282    0.0224    0.0073    0.4275    0.0625    0.0332   -0.0002    0 0005
   1.1400    0.1677    0.0080    0.4270    0.5567    0.0356   -0 0003    0 0005
   2.2452    0.2944    0.0072    0.4267    0.9870    0.0335   -0 0005    0 0005
   3.4051    0.4497    0.0057    0.4362    1.5113    0.0265   -0 0004    0 0005
   5.6862    0.7582    0.0046    0.4566    2.5685    0.0194   -0.0013    0 0005
   8.0367    1.1250    0.0105    0.4717    3.8566    0.0473   -0.0021    0 0005
  10.3882    1.5298    0.0105    0.4950    5.3339    0.0582   -0.0066    0 0005
  12.8491    1.9953    0.0091    0.5048    7.0841    0.0412   -0 0054    0 0005
  15.3278    2.5081    0.0235    0.5228    9.0388    0.1100   -0.0110    0 0005
  17.9168    3.0835    0.0277    0.5475   11.2534    0.1337   -0.0106    0 0005
   0.0092    0.0231    0.0073    0.4261    0.0673    0.0332   -0.0007    0 0005


                         CONFIG =0710
                         RUN NO. = 15
                         MACH NO. = 2.2
                         DYN PRESS.= 4.47
                         REYNOLDS NO. = 254992
                         REFERENCE AREA = 1.4849

   ALPHA       CN        CY        CA        CM        CLN       CLL        F
   0.0071    0.0209    0.0081    0.4215    0.0592    0 0349   -0.0002    0.0010
  -3.3187   -0.3815    0.0066    0.4251   -1.3117    0.0297   -0.0004    0.0010
  -2.2293   -0.2498    0.0079    0.4202   -0.8647    0.0353   -0 0005    0.0010
  -1.1370   -0.1152    0.0069    0.4214   -0.4067    0.0311   -0 0018    0.0010
   0.0045    0.0187    0.0074    0.4268    0.0479    0.0334   -0.0003    0.0010
   1.1400    0.1674    0.0072    0.4264    0.5559    0.0323   -0 0009    0.0010
   2.2510    0.3004    0.0064    0.4229    1.0098    0.0300   -0 0009    0.0010
   3.3758    0.4385    0.0058    0.4357    1.4751    0.0267   -0 0009    0.0010
   5.6873    0.7587    0.0039    0.4476    2.5684    0.0161   -0 0002    0.0010
   8.0379    1.1265    0.0112    0.4702    3.8612    0.0506   -0.0054    0.0010
  10.3882    1.5277    0.0120    0.4959    5.3265    0.0582   -0 0077    0.0010
  12.8378    1.9946    0.0061    0.5087    7.0778    0.0331   -0 0060    0.0010
  15.3292    2.5000    0.0214    0.5243    9.0033    0.1007   -0.0122    0.0010
  17.8913    3.0742    0.0308    0.5469   11.2156    0.1403   -0.0090    0.0010
  17.8945    3.0779    0.0300    0.5461   11.2270    0.1402   -0.0090    0.0010
   0.0090    0.0232    0.0073    0.4260    0.0658    0.0332    0.0003    0.0010
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CONFIG =07.0
RUN NO. = 16
MACH NO. = 2.2
DYN PRESS. = 4.47
REYNOLDS NO. = 254924
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0056	0.0194	0.0074	0.4200	0.0527	0.0333	-0.0002	0.0020
-3.3646	-0.3883	0.0089	0.4216	-1.3330	0.0364	0.0001	0.0020
-2.2859	-0.2576	0.0065	0.4204	-0.8905	0.0291	-0.0011	0.0020
-1.1383	-0.1167	0.0084	0.4199	-0.4116	0.0360	-0.0007	0.0020
0.0048	0.0187	0.0074	0.4246	0.0495	0.0317	0.0003	0.0020
1.1365	0.1639	0.0073	0.4239	0.5436	0.0309	-0.0009	0.0020
2.2900	0.2996	0.0064	0.4235	1.0050	0.0301	-0.0005	0.0020
3.4277	0.4520	0.0057	0.4385	1.5189	0.0264	-0.0009	0.0020
5.6855	0.7572	0.0054	0.4491	2.5604	0.0194	0.0003	0.0020
8.0359	1.1250	0.0105	0.4687	3.8517	0.0459	-0.0054	0.0020
10.3888	1.5293	0.0150	0.4945	5.3266	0.0649	-0.0067	0.0020
12.8135	1.9910	0.0054	0.5111	7.0586	0.0317	-0.0061	0.0020
15.3049	2.4972	0.0222	0.5245	8.9828	0.1010	-0.0113	0.0020
17.8897	3.0751	0.0278	0.5500	11.2032	0.1309	-0.0108	0.0020
0.0583	0.0329	0.0065	0.4273	0.1017	0.0296	-0.0002	0.0020

CONFIG =0710
RUN NO. = 17
MACH NO. = 2.2
DYN PRESS. = 4.47
REYNOLDS NO. = 254737
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0440	0.0284	0.0073	0.4265	0.0854	0.0331	-0.0013	0.0030
-3.3420	-0.3852	0.0082	0.4253	-1.3232	0.0314	0.0001	0.0030
-2.2873	-0.2588	0.0095	0.4213	-0.8943	0.0389	-0.0006	0.0030
-1.1402	-0.1191	0.0084	0.4228	-0.4188	0.0345	-0.0007	0.0030
0.0036	0.0171	0.0081	0.4223	0.0461	0.0351	-0.0013	0.0030
1.1147	0.1614	0.0065	0.4227	0.5363	0.0292	-0.0009	0.0030
2.2805	0.3012	0.0049	0.4285	1.0094	0.0236	-0.0011	0.0030
3.4258	0.4497	0.0065	0.4370	1.5123	0.0281	-0.0015	0.0030
5.6636	0.7549	0.0047	0.4538	2.5538	0.0162	-0.0008	0.0030
8.0038	1.1228	0.0105	0.4673	3.8437	0.0460	-0.0054	0.0030
10.3861	1.5263	0.0120	0.4944	5.3169	0.0584	-0.0078	0.0030
12.8858	2.0064	0.0015	0.5130	7.1168	0.0182	-0.0066	0.0030
15.3808	2.5134	0.0258	0.5242	9.0454	0.1151	-0.0122	0.0030
17.8882	3.0736	0.0279	0.5470	11.1967	0.1310	-0.0114	0.0030
0.0082	0.0224	0.0081	0.4246	0.0625	0.0333	-0.0008	0.0030

CONFIG =0710
RUN NO. = 18
MACH NO. = 2.2
DYN PRESS. = 4.47
REYNOLDS NO. = 254674
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0071	0.0209	0.0074	0.4221	0.0592	0.0333	-0.0013	0.0040
-3.3762	-0.3898	0.0112	0.4224	-1.3396	0.0430	0.0006	0.0040
-2.2873	-0.2588	0.0080	0.4205	-0.8942	0.0323	-0.0006	0.0040
-1.1394	-0.1182	0.0077	0.4214	-0.4149	0.0311	-0.0001	0.0040
0.0034	0.0172	0.0074	0.4192	0.0446	0.0318	-0.0002	0.0040
1.1268	0.1637	0.0080	0.4234	0.5444	0.0357	-0.0003	0.0040
2.2894	0.2989	0.0072	0.4258	1.0032	0.0317	-0.0011	0.0040
3.4258	0.4498	0.0065	0.4347	1.5124	0.0281	-0.0009	0.0040
5.6836	0.7549	0.0069	0.4507	2.5536	0.0244	-0.0013	0.0040
8.0456	1.1242	0.0112	0.4701	3.8515	0.0475	-0.0054	0.0040
10.3834	1.5233	0.0180	0.4898	5.3069	0.0813	-0.0077	0.0040
12.8618	1.9999	0.0061	0.5101	7.0908	0.0347	-0.0071	0.0040
15.3428	2.5053	0.0199	0.5281	9.0134	0.0958	-0.0123	0.0040
17.8911	3.0766	0.0278	0.5462	11.2080	0.1308	-0.0114	0.0040
0.0090	0.0232	0.0066	0.4246	0.0658	0.0283	-0.0002	0.0040

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CONFIG =0710
RUN NO. = 19
MACH NO. = 2.2
DYN PRESS. = 4.47
REYNOLDS NO. = 254534
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0082	0.0224	0.0089	0.4185	0.0625	0.0365	-0.0002	0.0050
-3.3432	-0.3860	0.0089	0.4207	-1.3296	0.0364	0.0001	0.0050
-2.2408	-0.2513	0.0094	0.4180	-0.8712	0.0387	0.0005	0.0050
-1.1377	-0.1159	0.0084	0.4184	-0.4099	0.0344	0.0004	0.0050
0.0048	0.0187	0.0066	0.4177	0.0495	0.0301	-0.0002	0.0050
1.1265	0.1637	0.0080	0.4188	0.5429	0.0341	0.0002	0.0050
2.2679	0.2978	0.0072	0.4211	0.9982	0.0318	-0.0005	0.0050
3.3695	0.4430	0.0080	0.4312	1.4881	0.0316	-0.0009	0.0050
5.7210	0.7632	0.0054	0.4429	2.5814	0.0177	-0.0008	0.0050
8.0717	1.1325	0.0135	0.4676	3.8795	0.0555	-0.0043	0.0050
10.3711	1.5315	0.0150	0.4900	5.3363	0.0680	-0.0077	0.0050
12.8353	1.9828	0.0055	0.5017	7.0262	0.0417	-0.0060	0.0050
15.3575	2.5001	0.0230	0.5258	8.9922	0.1042	-0.0124	0.0050
17.9048	3.0699	0.0287	0.5377	11.1838	0.1327	-0.0092	0.0050
0.0082	0.0224	0.0081	0.4193	0.0625	0.0333	-0.0013	0.0050

CONFIG =0710
RUN NO. = 20
MACH NO. = 2.2
DYN PRESS. = 4.46
REYNOLDS NO. = 254321
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0074	0.0217	0.0081	0.4177	0.0593	0.0350	-0.0008	0.0080
-3.3541	-0.3867	0.0097	0.4208	-1.3330	0.0381	-0.0005	0.0080
-2.2403	-0.2505	0.0102	0.4157	-0.8696	0.0403	0.0000	0.0080
-1.1393	-0.1175	0.0084	0.4159	-0.4170	0.0362	-0.0012	0.0080
-0.0076	0.0164	0.0059	0.4170	0.0398	0.0270	-0.0003	0.0080
1.1484	0.1660	0.0080	0.4188	0.5494	0.0324	-0.0009	0.0080
2.2897	0.2996	0.0087	0.4159	1.0033	0.0367	-0.0010	0.0080
3.3948	0.4378	0.0081	0.4265	1.4702	0.0317	-0.0009	0.0080
5.7310	0.7642	0.0039	0.4450	2.5850	0.0144	-0.0007	0.0080
8.0609	1.1318	0.0097	0.4646	3.8764	0.0441	-0.0054	0.0080
10.3577	1.5299	0.0150	0.4892	5.3306	0.0683	-0.0083	0.0080
12.8130	1.9860	0.0055	0.5093	7.0358	0.0355	-0.0072	0.0080
15.3709	2.5038	0.0222	0.5242	9.0052	0.1041	-0.0118	0.0080
17.8727	3.0719	0.0279	0.5462	11.1911	0.1313	-0.0103	0.0080
0.0082	0.0224	0.0074	0.4200	0.0625	0.0300	-0.0008	0.0080

CONFIG =0710
RUN NO. = 21
MACH NO. = 2.2
DYN PRESS. = 4.46
REYNOLDS NO. = 254259
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
-0.0055	0.0179	0.0066	0.4183	0.0495	0.0302	-0.0013	0.0100
-3.3984	-0.3920	0.0090	0.4240	-1.3478	0.0365	-0.0005	0.0100
-2.2754	-0.2566	0.0095	0.4144	-0.8877	0.0389	-0.0011	0.0100
-1.1488	-0.1177	0.0084	0.4196	-0.4144	0.0345	-0.0007	0.0100
0.0055	0.0194	0.0081	0.4238	0.0526	0.0350	-0.0008	0.0100
1.1060	0.1632	0.0058	0.4211	0.5420	0.0260	-0.0009	0.0100
2.2915	0.3011	0.0064	0.4189	1.0114	0.0284	-0.0021	0.0100
3.3739	0.4369	0.0073	0.4318	1.4704	0.0301	-0.0020	0.0100
5.7094	0.7619	0.0039	0.4466	2.5800	0.0144	-0.0013	0.0100
8.0732	1.1324	0.0112	0.4662	3.8807	0.0489	-0.0054	0.0100
10.3558	1.5297	0.0158	0.4868	5.3314	0.0716	-0.0077	0.0100
12.8092	1.9865	0.0062	0.5080	7.0424	0.0400	-0.0066	0.0100
15.3948	2.5075	0.0222	0.5172	9.0213	0.1007	-0.0123	0.0100
17.8874	3.0729	0.0279	0.5401	11.1936	0.1294	-0.0108	0.0100
0.0077	0.0216	0.0058	0.4238	0.0609	0.0268	-0.0013	0.0100

```
                    CONFIG = 0710
                    RUN NO.  = 22
                    MACH NO. = 2.2
                    DYN PRESS. = 4.47
                    REYNOLDS NO. = 254417
                    REFERENCE AREA = 1.4849

   ALPHA       CN        CY        CA        CM       CLN       CLL        F
  0.0050    0.0187    0.0074    0.4147    0.0511    0.0301   -0.0008    0.0200
 -3.3631   -0.3875    0.0089    0.4117   -1.3249    0.0362    0.0002    0.0200
 -2.2283   -0.2498    0.0109    0.4118   -0.8584    0.0433    0.0007    0.0200
 -1.1610   -0.1205    0.0077    0.4154   -0.4199    0.0328   -0.0017    0.0200
  0.0026    0.0156    0.0082    0.4139    0.0428    0.0334   -0.0007    0.0200
  1.1673    0.1644    0.0073    0.4164    0.5461    0.0308   -0.0014    0.0200
  2.2836    0.2929    0.0065    0.4175    0.9805    0.0271   -0.0016    0.0200
  3.3479    0.4304    0.0059    0.4191    1.4444    0.0222   -0.0021    0.0200
  5.7234    0.7582    0.0063    0.4307    2.5448    0.0264   -0.0008    0.0200
  8.0332    1.1179    0.0153    0.4480    3.7962    0.0698   -0.0061    0.0200
 10.3787    1.5230    0.0145    0.4747    5.2776    0.0641   -0.0058    0.0200
 12.8469    1.9735    0.0014    0.4894    6.9470    0.0236   -0.0032    0.0200
 15.3294    2.4811    0.0056    0.5115    8.8584    0.0262   -0.0035    0.0200
 17.8917    3.0464    0.0060    0.5318   11.0287    0.0404   -0.0064    0.0200
  0.0049    0.0179    0.0073    0.4260    0.0526    0.0333   -0.0002    0.0200


                    CONFIG = 0715
                    RUN NO.  = 23
                    MACH NO. = 2.2
                    DYN PRESS. = 4.46
                    REYNOLDS NO. = 255018
                    REFERENCE AREA = 1.4849

   ALPHA       CN        CY        CA        CM       CLN       CLL        F
  0.0036    0.0172    0.0089    0.4130    0.0462    0.0287   -0.0019    0.0000
 -3.3916   -0.3993    0.0112    0.4111   -1.3569    0.0333   -0.0015    0.0000
 -2.2440   -0.2574    0.0087    0.4081   -0.8805    0.0274   -0.0016    0.0000
 -1.1734   -0.1237    0.0092    0.4110   -0.4287    0.0297   -0.0012    0.0000
  0.0039    0.0179    0.0097    0.4145    0.0462    0.0320   -0.0020    0.0000
  1.1817    0.1705    0.0096    0.4096    0.5593    0.0310   -0.0016    0.0000
  2.2656    0.2976    0.0088    0.4104    0.9865    0.0307   -0.0018    0.0000
  3.4023    0.4489    0.0089    0.4193    1.4988    0.0286   -0.0016    0.0000
  5.6661    0.7606    0.0100    0.4337    2.5620    0.0329   -0.0008    0.0000
  7.9932    1.1276    0.0085    0.4539    3.8462    0.0235   -0.0008    0.0000
 10.3638    1.5348    0.0072    0.4704    5.3062    0.0235   -0.0023    0.0000
 12.8435    1.9855    0.0210    0.5002    6.9761    0.0832   -0.0085    0.0000
 15.3510    2.4910    0.0162    0.5180    8.8850    0.0695   -0.0085    0.0000
 17.8538    3.0409    0.0079    0.5454   10.9775    0.0388   -0.0044    0.0000
  0.0055    0.0194    0.0097    0.4111    0.0527    0.0302   -0.0008    0.0000


                    CONFIG = 0715
                    RUN NO.  = 24
                    MACH NO. = 2.2
                    DYN PRESS. = 4.46
                    REYNOLDS NO. = 254803
                    REFERENCE AREA = 1.4849

   ALPHA       CN        CY        CA        CM       CLN       CLL        F
 -0.0074    0.0156    0.0089    0.4161    0.0428    0.0304   -0.0019    0.0005
 -3.4005   -0.3973    0.0097    0.4113   -1.3517    0.0283   -0.0010    0.0005
 -2.2440   -0.2574    0.0087    0.4111   -0.8806    0.0274   -0.0016    0.0005
 -1.1629   -0.1229    0.0092    0.4117   -0.4271    0.0297   -0.0012    0.0005
  0.0134    0.0172    0.0112    0.4139    0.0445    0.0369   -0.0008    0.0005
  1.1698    0.1687    0.0096    0.4161    0.5541    0.0327   -0.0021    0.0005
  2.2887    0.2997    0.0103    0.4137    0.9967    0.0337   -0.0018    0.0005
  3.4075    0.4430    0.0089    0.4202    1.4789    0.0304   -0.0016    0.0005
  5.6634    0.7587    0.0078    0.4328    2.5558    0.0248   -0.0020    0.0005
  7.9821    1.1261    0.0100    0.4585    3.8428    0.0284   -0.0008    0.0005
 10.3904    1.5415    0.0048    0.4825    5.3321    0.0167   -0.0023    0.0005
 12.8235    1.9855    0.0157    0.5125    6.9764    0.0668   -0.0085    0.0005
 15.3241    2.4835    0.0147    0.5211    8.8592    0.0663   -0.0075    0.0005
 17.8426    3.0394    0.0132    0.5424   10.9740    0.0536   -0.0049    0.0005
  0.0050    0.0187    0.0097    0.4153    0.0511    0.0319   -0.0014    0.0005
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                        CONFIG =0715
                        RUN NO. = 25
                        MACH NO. = 2.2
                        DYN PRESS.= 4.46
                        REYNOLDS NO. = 254722
                        REFERENCE AREA = 1.4849

    ALPHA      CN        CY        CA        CM        CLN       CLL        F
    0.0017    0.0149    0.0105    0.4153    0.0395    0.0353   -0.0019    0.0010
   -3.3725   -0.3882    0.0127    0.4135   -1.3223    0.0395   -0.0009    0.0010
   -2.2656   -0.2585    0.0110    0.4107   -0.8859    0.0339   -0.0011    0.0010
   -1.1397   -0.1193    0.0092    0.4160   -0.4162    0.0297   -0.0024    0.0010
    0.0039    0.0179    0.0097    0.4160    0.0462    0.0320   -0.0014    0.0010
    1.1590    0.1680    0.0088    0.4177    0.5509    0.0295   -0.0022    0.0010
    2.2580    0.2998    0.0080    0.4150    0.9963    0.0273   -0.0018    0.0010
    3.3778    0.4444    0.0074    0.4217    1.4810    0.0256   -0.0028    0.0010
    5.6527    0.7579    0.0086    0.4305    2.5525    0.0282   -0.0019    0.0010
    8.0290    1.1336    0.0069    0.4583    3.8688    0.0184   -0.0013    0.0010
   10.4106    1.5422    0.0086    0.4862    5.3319    0.0282   -0.0029    0.0010
   12.8209    1.9825    0.0165    0.5064    6.9666    0.0685   -0.0085    0.0010
   15.3356    2.4850    0.0185    0.5211    8.8654    0.0778   -0.0086    0.0010
   17.8826    3.0456    0.0146    0.5476   10.9976    0.0581   -0.0049    0.0010
    0.0058    0.0194    0.0104    0.4172    0.0541    0.0335   -0.0014    0.0010

                        CONFIG =0715
                        RUN NO. = 26
                        MACH NO. = 2.2
                        DYN PRESS.= 4.46
                        REYNOLDS NO. = 254640
                        REFERENCE AREA = 1.4849

    ALPHA      CN        CY        CA        CM        CLN       CLL        F
    0.0036    0.0171    0.0104    0.4191    0.0461    0.0337   -0.0020    0.0020
   -3.4242   -0.4016    0.0105    0.4143   -1.3684    0.0319   -0.0021    0.0020
   -2.2656   -0.2589    0.0110    0.4151   -0.8872    0.0340   -0.0017    0.0020
   -1.1403   -0.1201    0.0084    0.4168   -0.4179    0.0264   -0.0024    0.0020
    0.0021    0.0157    0.0090    0.4168    0.0396    0.0288   -0.0025    0.0020
    1.1590    0.1677    0.0096    0.4194    0.5501    0.0311   -0.0022    0.0020
    2.2664    0.2979    0.0088    0.4190    0.9884    0.0290   -0.0018    0.0020
    3.3725    0.4384    0.0089    0.4240    1.4614    0.0290   -0.0017    0.0020
    5.6308    0.7557    0.0071    0.4360    2.5460    0.0216   -0.0020    0.0020
    8.0295    1.1343    0.0069    0.4568    3.8704    0.0201   -0.0024    0.0020
   10.3896    1.5407    0.0033    0.4794    5.3289    0.0102   -0.0040    0.0020
   12.8542    1.9862    0.0179    0.5108    6.9794    0.0766   -0.0085    0.0020
   15.3352    2.4817    0.0094    0.5264    8.8505    0.0579   -0.0074    0.0020
   17.8510    3.0378    0.0117    0.5485   10.9674    0.0488   -0.0072    0.0020
    0.0036    0.0171    0.0097    0.4185    0.0461    0.0303   -0.0014    0.0020

                        CONFIG =0715
                        RUN NO. = 27
                        MACH NO. = 2.2
                        DYN PRESS.= 4.46
                        REYNOLDS NO. = 254658
                        REFERENCE AREA = 1.4849

    ALPHA      CN        CY        CA        CM        CLN       CLL        F
    0.0031    0.0164    0.0104    0.4200    0.0444    0.0336   -0.0014    0.0030
   -3.3385   -0.3837    0.0119    0.4149   -1.3076    0.0362   -0.0020    0.0030
   -2.2429   -0.2559    0.0095    0.4142   -0.8773    0.0306   -0.0017    0.0030
   -1.1265   -0.1152    0.0114    0.4148   -0.4037    0.0361   -0.0013    0.0030
    0.0032    0.0172    0.0097    0.4178    0.0429    0.0304   -0.0015    0.0030
    1.1490    0.1680    0.0088    0.4193    0.5509    0.0295   -0.0022    0.0030
    2.2772    0.2991    0.0065    0.4202    0.9931    0.0208   -0.0013    0.0030
    3.3739    0.4400    0.0067    0.4224    1.4664    0.0224   -0.0017    0.0030
    5.6208    0.7556    0.0086    0.4360    2.5460    0.0282   -0.0025    0.0030
    8.0309    1.1343    0.0076    0.4584    3.8700    0.0200   -0.0013    0.0030
   10.3911    1.5401    0.0070    0.4910    5.3278    0.0215   -0.0029    0.0030
   12.8440    1.9835    0.0179    0.5041    6.9684    0.0733   -0.0085    0.0030
   15.3147    2.4843    0.0155    0.5274    8.8608    0.0631   -0.0076    0.0030
   17.8590    3.0427    0.0116    0.5492   10.9818    0.0485   -0.0061    0.0030
   -0.0152    0.0187    0.0082    0.4177    0.0496    0.0254   -0.0009    0.0030
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                    CONFIG  •0715
                    RUN NO.  • 28
                    MACH NO.  • 2.2
                    DYN PRESS. • 4.46
                    REYNOLDS NO. • 254487
                    REFERENCE AREA • 1.4849

  ALPHA       CN        CY        CA        CM        CLN       CLL        F
 -0.0148    0.0187    0.0097    0.4177    0.0527    0.0319   -0.0014    0.0040
 -3.2977   -0.3835    0.0119    0.4144   -1.3061    0.0362   -0.0020    0.0040
 -2.2421   -0.2548    0.0117    0.4167   -0.8730    0.0371   -0.0017    0.0040
 -1.1389   -0.1184    0.0092    0.4169   -0.4124    0.0296   -0.0013    0.0040
 -0.0174    0.0164    0.0089    0.4179    0.0412    0.0288   -0.0020    0.0040
  1.1706    0.1694    0.0096    0.4177    0.5574    0.0310   -0.0021    0.0040
  2.2900    0.3016    0.0103    0.4204    1.0030    0.0337   -0.0012    0.0040
  3.3968    0.4429    0.0066    0.4223    1.4778    0.0223   -0.0016    0.0040
  5.7014    0.7676    0.0077    0.4365    2.5850    0.0230   -0.0020    0.0040
  8.0067    1.1314    0.0077    0.4569    3.8591    0.0218   -0.0019    0.0040
 10.3896    1.5386    0.0063    0.4849    5.3215    0.0199   -0.0023    0.0040
 12.8327    1.9848    0.0150    0.5094    6.9732    0.0635   -0.0080    0.0040
 15.3136    2.4835    0.0192    0.5288    8.8558    0.0812   -0.0086    0.0040
 17.8495    3.0469    0.0116    0.5470   11.0001    0.0484   -0.0049    0.0040
  0.0071    0.0209    0.0089    0.4198    0.0593    0.0286   -0.0014    0.0040

                    CONFIG  •0715
                    RUN NO.  • 29
                    MACH NO.  • 2.2
                    DYN PRESS. • 4.46
                    REYNOLDS NO. • 254471
                    REFERENCE AREA • 1.4849

  ALPHA       CN        CY        CA        CM        CLN       CLL        F
  0.0052    0.0187    0.0097    0.4206    0.0526    0.0319   -0.0014    0.0050
 -3.3667   -0.3927    0.0097    0.4203   -1.3386    0.0283   -0.0016    0.0050
 -2.2627   -0.2552    0.0117    0.4162   -0.8734    0.0371   -0.0017    0.0050
 -1.1376   -0.1170    0.0099    0.4175   -0.4080    0.0312   -0.0013    0.0050
  0.0034    0.0172    0.0097    0.4206    0.0445    0.0320   -0.0014    0.0050
  1.1703    0.1695    0.0081    0.4207    0.5559    0.0261   -0.0016    0.0050
  2.2698    0.3020    0.0095    0.4249    1.0028    0.0305   -0.0018    0.0050
  3.3746    0.4400    0.0104    0.4256    1.4674    0.0354   -0.0016    0.0050
  5.6888    0.7647    0.0063    0.4357    2.5754    0.0198   -0.0020    0.0050
  8.0295    1.1328    0.0084    0.4577    3.8652    0.0232   -0.0008    0.0050
 10.3903    1.5414    0.0078    0.4878    5.3320    0.0265   -0.0023    0.0050
 12.8433    1.9855    0.0142    0.5108    6.9748    0.0619   -0.0086    0.0050
 15.3141    2.4835    0.0125    0.5274    8.8592    0.0549   -0.0087    0.0050
 17.8710    3.0483    0.0124    0.5552   11.0063    0.0517   -0.0060    0.0050
  0.0090    0.0232    0.0089    0.4216    0.0657    0.0269   -0.0020    0.0050

                    CONFIG  •0715
                    RUN NO.  • 30
                    MACH NO.  • 2.2
                    DYN PRESS. • 4.46
                    REYNOLDS NO. • 254662
                    REFERENCE AREA • 1.4849

  ALPHA       CN        CY        CA        CM        CLN       CLL        F
  0.0073    0.0209    0.0096    0.4252    0.0607    0.0319   -0.0025    0.0080
 -3.3952   -0.3918    0.0097    0.4195   -1.3340    0.0282   -0.0021    0.0080
 -2.2429   -0.2552    0.0109    0.4191   -0.8750    0.0338   -0.0017    0.0080
 -1.1295   -0.1190    0.0122    0.4209   -0.4136    0.0394   -0.0013    0.0080
 -0.0082    0.0157    0.0090    0.4199    0.0380    0.0289   -0.0026    0.0080
  1.1471    0.1657    0.0096    0.4231    0.5443    0.0327   -0.0010    0.0080
  2.2585    0.3006    0.0088    0.4211    0.9980    0.0306   -0.0012    0.0080
  3.3946    0.4401    0.0081    0.4263    1.4675    0.0272   -0.0017    0.0080
  5.6882    0.7628    0.0092    0.4397    2.5700    0.0296   -0.0025    0.0080
  8.0174    1.1321    0.0062    0.4568    3.8623    0.0169   -0.0030    0.0080
 10.3640    1.5347    0.0064    0.4871    5.3077    0.0218   -0.0023    0.0080
 12.8214    1.9806    0.0157    0.5133    6.9588    0.0684   -0.0074    0.0080
 15.3257    2.4824    0.0162    0.5297    8.8519    0.0630   -0.0082    0.0080
 17.8684    3.0419    0.0131    0.5568   10.9799    0.0550   -0.0061    0.0080
  0.0065    0.0201    0.0096    0.4238    0.0575    0.0318   -0.0008    0.0080
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CONFIG =0715
RUN NO. = 31
MACH NO. = 2.2
DYN PRESS.= 4.46
REYNOLDS NO. = 254429
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
-0.0069	0.0164	0.0089	0.4262	0.0444	0.0287	-0.0020	0.0100
-3.3673	-0.3935	0.0119	0.4203	-1.3404	0.0365	-0.0026	0.0100
-2.2424	-0.2559	0.0109	0.4233	-0.8742	0.0338	-0.0011	0.0100
-1.1279	-0.1177	0.0106	0.4245	-0.4076	0.0344	-0.0007	0.0100
-0.0071	0.0164	0.0074	0.4268	0.0429	0.0238	-0.0015	0.0100
1.1706	0.1694	0.0080	0.4253	0.5574	0.0261	-0.0022	0.0100
2.2453	0.2968	0.0073	0.4242	0.9865	0.0257	-0.0018	0.0100
3.3736	0.4391	0.0074	0.4316	1.4662	0.0240	-0.0017	0.0100
5.6997	0.7654	0.0070	0.4456	2.5800	0.0213	-0.0020	0.0100
8.0048	1.1275	0.0076	0.4684	3.8472	0.0218	-0.0019	0.0100
10.3880	1.5392	0.0071	0.4901	5.3223	0.0233	-0.0023	0.0100
12.8419	1.9840	0.0165	0.5169	6.9698	0.0718	-0.0085	0.0100
15.3223	2.4820	0.0155	0.5380	8.8510	0.0649	-0.0082	0.0100
17.8490	3.0364	0.0102	0.5530	10.9579	0.0424	-0.0062	0.0100
0.0052	0.0186	0.0096	0.4261	0.0525	0.0319	-0.0025	0.0100

CONFIG =0715
RUN NO. = 32
MACH NO. = 2.2
DYN PRESS.= 4.46
REYNOLDS NO. = 254564
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0009	0.0134	0.0112	0.4086	0.0378	0.0352	-0.0008	0.0200
-3.3838	-0.3929	0.0119	0.4074	-1.3195	0.0376	-0.0007	0.0200
-2.2339	-0.2594	0.0117	0.4089	-0.8733	0.0385	-0.0014	0.0200
-1.1657	-0.1277	0.0092	0.4123	-0.4345	0.0298	-0.0023	0.0200
-0.0333	0.0088	0.0090	0.4147	0.0214	0.0306	-0.0025	0.0200
1.1879	0.1662	0.0096	0.4162	0.5469	0.0310	-0.0010	0.0200
2.2648	0.2964	0.0096	0.4152	0.9819	0.0307	-0.0013	0.0200
3.3901	0.4371	0.0067	0.4132	1.4489	0.0210	-0.0012	0.0200
5.7003	0.7606	0.0072	0.4266	2.5310	0.0206	-0.0006	0.0200
8.0103	1.1177	0.0035	0.4504	3.7694	-0.0015	0.0003	0.0200
10.3481	1.5212	0.0014	0.4760	5.2258	-0.0016	-0.0017	0.0200
12.8238	1.9676	0.0175	0.4981	6.8773	0.0696	-0.0067	0.0200
15.2832	2.4596	0.0130	0.5168	8.7185	0.0521	-0.0071	0.0200
17.8200	3.0106	0.0047	0.5441	10.8091	0.0182	-0.0058	0.0200
-0.0091	0.0126	0.0089	0.4198	0.0394	0.0303	-0.0008	0.0200

CONFIG =0715
RUN NO. = 33
MACH NO. = 1.63
DYN PRESS.= 5.89
REYNOLDS NO. = 308533
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0432	0.0640	-0.0025	0.5148	0.1054	0.0285	-0.0008	0.0000
0.0495	0.0589	-0.0025	0.5061	0.0982	0.0283	-0.0016	0.0000
0.0487	0.0578	-0.0008	0.5108	0.0969	0.0345	-0.0015	0.0000
-3.5220	-0.4629	0.0014	0.5105	-1.3711	0.0385	0.0001	0.0000
-2.3250	-0.2799	0.0000	0.5098	-0.8553	0.0365	-0.0008	0.0000
-1.1753	-0.1234	-0.0019	0.5150	-0.4085	0.0273	-0.0009	0.0000
-0.0014	0.0395	-0.0053	0.5132	0.0435	0.0211	-0.0011	0.0000
1.2549	0.2309	-0.0035	0.5205	0.5845	0.0306	-0.0017	0.0000
2.4403	0.4034	-0.0011	0.5228	1.0692	0.0381	-0.0028	0.0000
3.6088	0.5775	-0.0038	0.5160	1.5650	0.0255	-0.0025	0.0000
6.0674	0.9564	-0.0048	0.5243	2.6781	0.0146	-0.0016	0.0000
8.5087	1.3588	-0.0111	0.5502	3.9456	-0.0214	0.0001	0.0000
11.0750	1.8295	0.0028	0.5751	5.5093	0.0495	-0.0077	0.0000
13.6826	2.3287	-0.0070	0.6140	7.2050	0.0194	-0.0101	0.0000
16.3238	2.8564	-0.0138	0.6306	9.0649	-0.0006	-0.0089	0.0000
19.0807	3.4580	-0.0224	0.6496	11.2912	-0.0181	-0.0127	0.0000
0.0443	0.0531	0.0004	0.5105	0.0866	0.0368	-0.0011	0.0000
0.0314	0.0503	-0.0013	0.5090	0.0793	0.0283	-0.0011	0.0000

CONFIG =0715
RUN NO. = 34
MACH NO. = 1.63
DYN PRESS.= 5.89
REYNOLDS NO. = 307660
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0300	0.0486	-0.0059	0.5141	0.0769	0.0256	-0.0010	0.0005
0.0410	0.0496	-0.0002	0.5128	0.0790	0.0356	-0.0015	0.0005
-3.4710	-0.4531	0.0019	0.5131	-1.3382	0.0394	0.0006	0.0005
-2.3451	-0.2803	-0.0017	0.5154	-0.8505	0.0288	0.0004	0.0005
-1.1754	-0.1246	-0.0019	0.5126	-0.4062	0.0285	-0.0013	0.0005
0.0254	0.0445	-0.0013	0.5170	0.0642	0.0296	-0.0019	0.0005
1.2459	0.2306	-0.0030	0.5244	0.5884	0.0305	-0.0030	0.0005
2.4445	0.4056	-0.0057	0.5262	1.0840	0.0254	-0.0027	0.0005
3.6367	0.5838	-0.0056	0.5194	1.5885	0.0191	-0.0038	0.0005
6.0430	0.9530	-0.0043	0.5262	2.6717	0.0196	-0.0024	0.0005
8.4774	1.3583	-0.0112	0.5499	3.9507	-0.0191	-0.0002	0.0005
11.0514	1.8280	-0.0035	0.5823	5.5094	0.0284	-0.0090	0.0005
13.6805	2.3258	-0.0030	0.6111	7.2020	0.0331	-0.0117	0.0005
16.3012	2.8534	-0.0127	0.6312	9.0596	0.0044	-0.0114	0.0005
19.0942	3.4601	-0.0190	0.6582	11.3031	-0.0070	-0.0131	0.0005
0.0189	0.0480	-0.0019	0.5124	0.0730	0.0308	-0.0019	0.0005
0.0291	0.0479	-0.0002	0.5076	0.0741	0.0381	-0.0014	0.0005
0.0286	0.0474	-0.0013	0.5105	0.0729	0.0307	-0.0015	0.0005

CONFIG =0715
RUN NO. = 35
MACH NO. = 1.63
DYN PRESS. = 5.87
REYNOLDS NO. = 305807
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0373	0.0520	0.0014	0.5191	0.1050	0.0403	-0.0021	0.0010
0.0370	0.0514	-0.0027	0.5248	0.1051	0.0278	-0.0017	0.0010
-3.5092	-0.4581	0.0058	0.5164	-1.3271	0.0539	0.0017	0.0010
-2.3248	-0.2769	-0.0008	0.5193	-0.8173	0.0333	-0.0010	0.0010
-1.1681	-0.1222	-0.0021	0.5162	-0.3779	0.0329	-0.0001	0.0010
0.0330	0.0480	-0.0015	0.5213	0.0938	0.0353	-0.0021	0.0010
1.2430	0.2348	-0.0043	0.5312	0.6178	0.0276	-0.0028	0.0010
2.4387	0.4077	-0.0013	0.5282	1.1051	0.0363	-0.0026	0.0010
3.6555	0.5910	0.0028	0.5207	1.6221	0.0449	-0.0028	0.0010
6.0502	0.9601	-0.0072	0.5294	2.7035	0.0068	-0.0019	0.0010
8.4905	1.3642	-0.0066	0.5571	3.9712	-0.0043	-0.0002	0.0010
11.0416	1.8330	0.0011	0.5828	5.5257	0.0458	-0.0077	0.0010
13.6569	2.3320	-0.0053	0.6136	7.2220	0.0294	-0.0108	0.0010
16.2965	2.8528	-0.0116	0.6390	9.0597	0.0081	-0.0080	0.0010
19.0770	3.4628	-0.0202	0.6525	11.3156	-0.0107	-0.0126	0.0010
0.0265	0.0508	-0.0009	0.5166	0.1038	0.0302	-0.0004	0.0010
0.0365	0.0509	-0.0015	0.5161	0.1038	0.0327	-0.0012	0.0010

CONFIG =0715
RUN NO. = 36
MACH NO. = 1.63
DYN PRESS. = 5.87
REYNOLDS NO. = 305742
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0154	0.0497	-0.0021	0.5121	0.1013	0.0315	-0.0016	0.0020
0.0343	0.0486	-0.0038	0.5120	0.0989	0.0302	-0.0016	0.0020
-3.4627	-0.4523	0.0035	0.5116	-1.3096	0.0463	0.0005	0.0020
-2.3594	-0.2815	-0.0025	0.5136	-0.8285	0.0296	-0.0001	0.0020
-1.1571	-0.1217	0.0014	0.5104	-0.3744	0.0404	-0.0006	0.0020
0.0327	0.0474	-0.0004	0.5167	0.0937	0.0402	-0.0025	0.0020
1.2430	0.2342	-0.0020	0.5230	0.6189	0.0350	-0.0027	0.0020
2.4532	0.4118	-0.0024	0.5236	1.1176	0.0325	-0.0038	0.0020
3.6147	0.5800	-0.0012	0.5156	1.5959	0.0337	-0.0027	0.0020
6.0116	0.9534	-0.0055	0.5239	2.6847	0.0144	-0.0022	0.0020
8.4665	1.3603	-0.0066	0.5491	3.9612	-0.0043	0.0003	0.0020
11.0433	1.8317	-0.0069	0.5803	5.5233	0.0159	-0.0086	0.0020
13.6293	2.3257	-0.0058	0.6085	7.1999	0.0247	-0.0109	0.0020
16.2704	2.8477	-0.0115	0.6287	9.0424	0.0095	-0.0101	0.0020
19.0504	3.4571	-0.0242	0.6515	11.2972	-0.0230	-0.0143	0.0020
0.0270	0.0508	-0.0027	0.5133	0.1062	0.0302	-0.0025	0.0020
0.0362	0.0503	-0.0009	0.5098	0.1037	0.0340	-0.0025	0.0020

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                    CONFIG =0715
                    RUN NO. = 37
                    MACH NO. = 1.63
                    DYN PRESS.= 5.87
                    REYNOLDS NO. = 305113
                    REFERENCE AREA = 1.4849

   ALPHA      CN        CY        CA        CM        CLN       CLL        F
   0.0343    0.0486   -0.0009    0.5109    0.0988    0.0315   -0.0021    0.0030
   0.0353    0.0491   -0.0015    0.5161    0.1024    0.0327   -0.0025    0.0030
  -3.5200   -0.4500   -0.0005    0.5154   -1.3020    0.0338    0.0005    0.0030
  -2.3265   -0.2782    0.0021    0.5116   -0.8200    0.0432   -0.0005    0.0030
   0.0000    0.0000    0.0000    0.0000    0.0000    0.0000    0.0000    0.0000
   0.0111    0.0457   -0.0026    0.5180    0.0900    0.0278   -0.0025    0.0030
   1.2427    0.2336   -0.0014    0.5207    0.6189    0.0375   -0.0027    0.0030
   2.4545    0.4123   -0.0025    0.5236    1.1225    0.0324   -0.0029    0.0030
   3.5834    0.5789   -0.0011    0.5151    1.5922    0.0350   -0.0027    0.0030
   6.0013    0.9515   -0.0038    0.5243    2.6810    0.0218   -0.0013    0.0030
   8.4657    1.3591   -0.0118    0.5462    3.9601   -0.0193    0.0004    0.0030
  11.0237    1.8256   -0.0081    0.5886    5.5048    0.0160   -0.0077    0.0030
  13.6252    2.3217   -0.0012    0.6091    7.1897    0.0409   -0.0099    0.0030
  16.2690    2.8499   -0.0133    0.6318    9.0523    0.0033   -0.0097    0.0030
  19.0193    3.4480   -0.0213    0.6527   11.2651   -0.0153   -0.0131    0.0030
   0.0162    0.0503   -0.0009    0.5156    0.1038    0.0327   -0.0017    0.0030
   0.0259    0.0496    0.0014    0.5132    0.1035    0.0365   -0.0021    0.0030

                    CONFIG =0715
                    RUN NO. = 38
                    MACH NO. = 1.63
                    DYN PRESS.= 5.87
                    REYNOLDS NO. = 305092
                    REFERENCE AREA = 1.4849

   ALPHA      CN        CY        CA        CM        CLN       CLL        F
   0.0121    0.0462    0.0008    0.5116    0.0936    0.0402   -0.0024    0.0040
   0.0121    0.0463   -0.0021    0.5109    0.0937    0.0352   -0.0020    0.0040
  -3.5227   -0.4523    0.0023    0.5101   -1.3096    0.0438    0.0005    0.0040
  -2.3475   -0.2798   -0.0007    0.5124   -0.8236    0.0309   -0.0010    0.0040
  -1.1687   -0.1234    0.0014    0.5070   -0.3782    0.0404   -0.0018    0.0040
   0.0111    0.0457   -0.0032    0.5110    0.0901    0.0303   -0.0020    0.0040
   1.2446    0.2350   -0.0049    0.5188    0.6231    0.0360   -0.0030    0.0040
   2.4527    0.4106   -0.0042    0.5195    1.1176    0.0262   -0.0034    0.0040
   3.6155    0.5806   -0.0017    0.5138    1.5984    0.0324   -0.0031    0.0040
   6.0126    0.9526   -0.0026    0.5220    2.6846    0.0219   -0.0026    0.0040
   8.4425    1.3562   -0.0112    0.5469    3.9513   -0.0191   -0.0013    0.0040
  11.0077    1.8230   -0.0063    0.5779    5.4951    0.0175   -0.0078    0.0040
  13.6297    2.3225   -0.0041    0.6054    7.1923    0.0308   -0.0104    0.0040
  16.2476    2.8487   -0.0093    0.6261    9.0486    0.0170   -0.0097    0.0040
  19.0270    3.4543   -0.0196    0.6481   11.2874   -0.0105   -0.0122    0.0040
  19.0383    3.4554   -0.0219    0.6509   11.2911   -0.0168   -0.0126    0.0040
   0.0170    0.0508   -0.0015    0.5126    0.1061    0.0327   -0.0025    0.0040
   0.0375    0.0514   -0.0015    0.5086    0.1075    0.0327   -0.0025    0.0040

                    CONFIG =0715
                    RUN NO. = 39
                    MACH NO. = 1.63
                    DYN PRESS.= 5.87
                    REYNOLDS NO. = 305110
                    REFERENCE AREA = 1.4849

   ALPHA      CN        CY        CA        CM        CLN       CLL        F
   0.0259    0.0497   -0.0004    0.5110    0.1037    0.0352   -0.0020    0.0050
   0.0131    0.0468    0.0013    0.5145    0.0973    0.0414   -0.0020    0.0050
  -3.4601   -0.4506    0.0012    0.5116   -1.3009    0.0375    0.0005    0.0050
  -2.3373   -0.2794    0.0010    0.5116   -0.8213    0.0382   -0.0001    0.0050
  -1.1901   -0.1252    0.0037    0.5105   -0.3809    0.0479   -0.0013    0.0050
   0.0370    0.0509   -0.0021    0.5202    0.1063    0.0302   -0.0012    0.0050
   1.2313    0.2319   -0.0032    0.5219    0.6163    0.0325   -0.0031    0.0050
   2.4529    0.4106   -0.0047    0.5230    1.1188    0.0249   -0.0034    0.0050
   3.5952    0.5800   -0.0018    0.5209    1.5983    0.0324   -0.0031    0.0050
   5.9878    0.9480   -0.0061    0.5255    2.6722    0.0144   -0.0026    0.0050
   8.4325    1.3563   -0.0101    0.5515    3.9514   -0.0155    0.0003    0.0050
  10.9779    1.8205   -0.0012    0.5737    5.4887    0.0361   -0.0077    0.0050
  13.6439    2.3227   -0.0058    0.6091    7.1948    0.0244   -0.0104    0.0050
  16.2563    2.8437   -0.0070    0.6298    9.0323    0.0244   -0.0088    0.0050
  19.0210    3.4492   -0.0253    0.6515   11.2702   -0.0291   -0.0122    0.0050
   0.0289    0.0525   -0.0015    0.5143    0.1111    0.0326   -0.0016    0.0050
   0.0377    0.0513    0.0053    0.5103    0.1083    0.0501   -0.0021    0.0050
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                      CONFIG =0715
                      RUN NO. = 40
                      MACH NO. = 1.63
                      DYN PRESS.= 5.87
                      REYNOLDS NO. = 304918
                      REFERENCE AREA = 1.4849

   ALPHA       CN        CY        CA        CM        CLN       CLL        F
   0.0359    0.0497   -0.0021    0.5150    0.1037    0.0314   -0.0025    0.0080
   0.0348    0.0485    0.0008    0.5115    0.1011    0.0402   -0.0020    0.0080
  -3.5055   -0.4558    0.0046    0.5095   -1.3148    0.0500    0.0006    0.0080
  -2.3349   -0.2775    0.0021    0.5124   -0.8163    0.0432   -0.0009    0.0080
  -1.1655   -0.1211    0.0002    0.5099   -0.3682    0.0353   -0.0014    0.0080
   0.0375    0.0514   -0.0027    0.5144    0.1075    0.0277   -0.0021    0.0080
   1.2208    0.2313   -0.0032    0.5231    0.6151    0.0300   -0.0027    0.0080
   2.4638    0.4123    0.0010    0.5143    1.1188    0.0425   -0.0029    0.0080
   3.5818    0.5766   -0.0080    0.5163    1.5898    0.0137   -0.0035    0.0080
   5.9857    0.9458   -0.0055    0.5220    2.6672    0.0156   -0.0021    0.0080
   8.4577    1.3608   -0.0067    0.5491    3.9661   -0.0043   -0.0001    0.0080
  11.0347    1.8236   -0.0018    0.5750    5.5007    0.0334   -0.0081    0.0080
  13.6183    2.3240   -0.0070    0.6068    7.1997    0.0221   -0.0112    0.0080
  16.2458    2.8470   -0.0110    0.6250    9.0437    0.0108   -0.0092    0.0080
  19.0315    3.4535   -0.0213    0.6483   11.2843   -0.0156   -0.0118    0.0080
   0.0410    0.0549   -0.0009    0.5109    0.1163    0.0327   -0.0025    0.0080
   0.0526    0.0559   -0.0032    0.5094    0.1210    0.0300   -0.0020    0.0080

                      CONFIG =0715
                      RUN NO. = 41
                      MACH NO. = 1.63
                      DYN PRESS.= 5.87
                      REYNOLDS NO. = 304556
                      REFERENCE AREA = 1.4849

   ALPHA       CN        CY        CA        CM        CLN       CLL        F
   0.0508    0.0542   -0.0038    0.5113    0.1162    0.0276   -0.0020    0.0100
   0.0391    0.0526   -0.0015    0.5109    0.1125    0.0326   -0.0020    0.0100
  -3.4469   -0.4478    0.0029    0.5139   -1.2922    0.0437    0.0005    0.0100
  -2.3482   -0.2810    0.0021    0.5124   -0.8238    0.0432   -0.0009    0.0100
  -1.1434   -0.1186    0.0002    0.5120   -0.3627    0.0352   -0.0006    0.0100
   0.0375    0.0514   -0.0027    0.5161    0.1076    0.0277   -0.0017    0.0100
   1.2210    0.2313   -0.0077    0.5219    0.6164    0.0224   -0.0030    0.0100
   2.4535    0.4118   -0.0013    0.5166    1.1188    0.0350   -0.0034    0.0100
   3.5850    0.5787   -0.0052    0.5202    1.5963    0.0199   -0.0027    0.0100
   5.9794    0.9492   -0.0055    0.5267    2.6771    0.0132   -0.0030    0.0100
   8.4962    1.3676   -0.0078    0.5502    3.9907   -0.0071   -0.0004    0.0100
  11.0369    1.8279   -0.0086    0.5793    5.5147    0.0098   -0.0086    0.0100
  13.6025    2.3194   -0.0035    0.6121    7.1824    0.0335   -0.0108    0.0100
  16.2482    2.8493   -0.0115    0.6325    9.0499    0.0083   -0.0089    0.0100
  18.9976    3.4469   -0.0195    0.6557   11.2591   -0.0102   -0.0123    0.0100
   0.0828    0.0652   -0.0021    0.5166    0.1487    0.0312   -0.0025    0.0100
   0.0913    0.0639   -0.0061    0.5110    0.1435    0.0273   -0.0011    0.0100

                      CONFIG =0715
                      RUN NO. = 42   .
                      MACH NO. = 1.63
                      DYN PRESS.= 5.87
                      REYNOLDS NO. = 304757
                      REFERENCE AREA = 1.4849

   ALPHA       CN        CY        CA        CM        CLN       CLL        F
   0.0907    0.0633   -0.0038    0.5105    0.1422    0.0250   -0.0025    0.0200
   0.0881    0.0612   -0.0072    0.5020    0.1351    0.0151   -0.0020    0.0200
  -3.4593   -0.4506    0.0006    0.4943   -1.2972    0.0338   -0.0007    0.0200
  -2.3128   -0.2763   -0.0025    0.4973   -0.8086    0.0233   -0.0013    0.0200
  -1.1780   -0.1222   -0.0020    0.5002   -0.3779    0.0243   -0.0014    0.0200
   0.0233    0.0474   -0.0015    0.5010    0.0962    0.0302   -0.0016    0.0200
   1.2188    0.2308   -0.0019    0.5024    0.6067    0.0266   -0.0032    0.0200
   2.4254    0.4050   -0.0063    0.5017    1.0956    0.0128   -0.0026    0.0200
   3.6127    0.5782   -0.0005    0.4993    1.5865    0.0326   -0.0027    0.0200
   6.0012    0.9490   -0.0066    0.5114    2.6727    0.0045   -0.0010    0.0200
   8.4938    1.3642   -0.0180    0.5368    3.9775   -0.0591    0.0048    0.0200
  11.0391    1.8241   -0.0143    0.5680    5.5073   -0.0177   -0.0065    0.0200
  13.6042    2.3175   -0.0075    0.5974    7.1778    0.0098   -0.0092    0.0200
  16.2162    2.8410   -0.0188    0.6194    9.0113   -0.0260   -0.0091    0.0200
  18.9957    3.4436   -0.0239    0.6359   11.2311   -0.0345   -0.0125    0.0200
   0.0905    0.0635   -0.0015    0.4997    0.1412    0.0276   -0.0021    0.0200
   0.0873    0.0606   -0.0021    0.5003    0.1325    0.0251   -0.0017    0.0200
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CONFIG •0715
RUN NO. • 43
MACH NO. • 1.63
DYN PRESS. • 5.87
REYNOLDS NO. • 305072
REFERENCE AREA • 1.4849
```

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0883	0.0610	-0.0056	0.5255	0.1359	0.0249	-0.0021	0.0000
-9.5794	-1.4150	0.0123	0.5507	-4.2332	0.0709	0.0045	0.0000
-4.7178	-0.6315	0.0026	0.5212	-1.8231	0.0385	0.0009	0.0000
-2.3296	-0.2809	-0.0007	0.5186	-0.8309	0.0358	0.0007	0.0000
0.0449	0.0497	0.0008	0.5201	0.0988	0.0403	-0.0013	0.0000
2.4500	0.4078	-0.0001	0.5245	1.1057	0.0399	-0.0030	0.0000
4.7659	0.7475	-0.0054	0.5224	2.0745	0.0180	-0.0026	0.0000
9.7963	1.6037	-0.0091	0.5649	4.7624	-0.0005	-0.0048	0.0000
0.0362	0.0502	0.0008	0.5188	0.1035	0.0426	-0.0012	0.0000

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CONFIG •0710
RUN NO. • 44
MACH NO. • 1.63
DYN PRESS. • 5.88
REYNOLDS NO. • 306281
REFERENCE AREA • 1.4849
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ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0345	0.0509	-0.0043	0.5086	0.0940	0.0364	-0.0016	0.0000
0.0453	0.0514	0.0002	0.5068	0.0963	0.0439	-0.0004	0.0000
-3.4975	-0.4548	-0.0028	0.5045	-1.3201	0.0386	0.0031	0.0000
-2.3489	-0.2788	-0.0019	0.5110	-0.8283	0.0369	0.0008	0.0000
-1.1581	-0.1194	0.0003	0.5074	-0.3828	0.0465	-0.0002	0.0000
0.0308	0.0474	-0.0015	0.5050	0.0839	0.0427	-0.0012	0.0000
1.2149	0.2285	-0.0071	0.5109	0.5904	0.0313	-0.0010	0.0000
2.3772	0.3993	-0.0063	0.5117	1.0641	0.0266	-0.0022	0.0000
3.5922	0.5822	-0.0033	0.5090	1.5744	0.0366	-0.0037	0.0000
6.0219	0.9537	-0.0064	0.5173	2.6296	0.0243	-0.0048	0.0000
8.4228	1.3498	-0.0068	0.5369	3.8613	0.0185	-0.0060	0.0000
10.9983	1.8122	-0.0002	0.5578	5.3864	0.0489	-0.0083	0.0000
13.6089	2.3091	-0.0106	0.5794	7.1060	0.0119	-0.0073	0.0000
16.2333	2.8303	-0.0211	0.6104	8.9798	-0.0287	-0.0068	0.0000
18.9723	3.4331	-0.0118	0.6185	11.2665	0.0175	-0.0144	0.0000
0.0806	0.0651	-0.0038	0.5073	0.1375	0.0336	-0.0017	0.0000
0.0793	0.0640	-0.0015	0.5032	0.1337	0.0411	-0.0016	0.0000

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CONFIG •0710
RUN NO. • 45
MACH NO. • 1.63
DYN PRESS. • 5.88
REYNOLDS NO. • 306290
REFERENCE AREA • 1.4849
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ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0782	0.0628	-0.0021	0.5026	0.1312	0.0386	-0.0012	0.0005
0.0782	0.0628	-0.0044	0.5032	0.1312	0.0337	-0.0020	0.0005
-3.5530	-0.4607	0.0012	0.4984	-1.3330	0.0474	0.0011	0.0005
-2.3379	-0.2783	0.0015	0.5087	-0.8247	0.0480	0.0012	0.0005
-1.1689	-0.1206	-0.0003	0.5022	-0.3840	0.0440	-0.0001	0.0005
0.0350	0.0508	0.0002	0.5016	0.0963	0.0426	-0.0012	0.0005
1.2297	0.2325	-0.0019	0.5052	0.6038	0.0388	-0.0023	0.0005
2.4622	0.4125	-0.0058	0.5080	1.1051	0.0239	-0.0014	0.0005
3.6168	0.5849	-0.0056	0.5071	1.5860	0.0289	-0.0024	0.0005
6.0365	0.9544	-0.0052	0.5158	2.6370	0.0266	-0.0047	0.0005
8.4459	1.3502	-0.0080	0.5332	3.8659	0.0135	-0.0060	0.0005
11.0084	1.8116	-0.0008	0.5630	5.3885	0.0464	-0.0096	0.0005
13.5856	2.3056	-0.0089	0.5784	7.0984	0.0157	-0.0077	0.0005
16.2184	2.8251	-0.0148	0.6075	8.9683	-0.0075	-0.0071	0.0005
19.0054	3.4339	-0.0084	0.6109	11.2748	0.0294	-0.0130	0.0005
0.0500	0.0645	-0.0010	0.5057	0.1361	0.0411	-0.0012	0.0005
0.0392	0.0639	-0.0010	0.5034	0.1336	0.0449	-0.0025	0.0005

CONFIG =0710
RUN NO. = 46
MACH NO. = 1.63
DYN PRESS.= 5.88
REYNOLDS NO. = 306126
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0393	0.0640	-0.0021	0.5023	0.1337	0.0387	-0.0021	0.0010
0.0376	0.0622	-0.0032	0.5034	0.1299	0.0362	-0.0025	0.0010
-3.5098	-0.4572	0.0001	0.5006	-1.3254	0.0425	0.0002	0.0010
-2.3392	-0.2794	0.0010	0.5058	-0.8284	0.0431	0.0003	0.0010
-1.1893	-0.1212	0.0014	0.5029	-0.3842	0.0515	-0.0009	0.0010
0.0363	0.0519	0.0025	0.5028	0.0998	0.0513	-0.0020	0.0010
1.2191	0.2319	-0.0025	0.5052	0.6025	0.0388	-0.0027	0.0010
2.4614	0.4119	-0.0052	0.5080	1.1025	0.0265	-0.0031	0.0010
3.5921	0.5802	-0.0022	0.5049	1.5745	0.0390	-0.0040	0.0010
5.9902	0.9488	-0.0024	0.5102	2.6197	0.0366	-0.0043	0.0010
8.4502	1.3536	-0.0114	0.5327	3.8782	0.0034	-0.0068	0.0010
11.0093	1.8122	-0.0059	0.5566	5.3913	0.0265	-0.0087	0.0010
13.5727	2.3028	-0.0089	0.5773	7.0910	0.0145	-0.0073	0.0010
16.2364	2.8320	-0.0194	0.6017	8.9907	-0.0226	-0.0063	0.0010
19.0101	3.4372	-0.0113	0.6133	11.2895	0.0156	-0.0143	0.0010
0.0538	0.0679	0.0002	0.5045	0.1460	0.0485	-0.0016	0.0010
0.0530	0.0674	0.0013	0.5011	0.1435	0.0486	-0.0021	0.0010

CONFIG =0710
RUN NO. = 47
MACH NO. = 1.63
DYN PRESS.= 5.88
REYNOLDS NO. = 305836
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0619	0.0662	-0.0004	0.5010	0.1411	0.0460	-0.0016	0.0020
0.0519	0.0663	-0.0032	0.5010	0.1412	0.0361	-0.0016	0.0020
-3.5085	-0.4469	0.0023	0.4994	-1.2956	0.0522	0.0010	0.0020
-2.3028	-0.2737	-0.0031	0.5033	-0.8109	0.0380	-0.0004	0.0020
-1.1894	-0.1212	-0.0049	0.5017	-0.3852	0.0365	-0.0005	0.0020
0.0359	0.0519	-0.0032	0.5021	0.0976	0.0425	-0.0015	0.0020
1.2191	0.2319	-0.0019	0.5052	0.6026	0.0388	-0.0019	0.0020
2.4397	0.4101	-0.0052	0.5070	1.0988	0.0265	-0.0030	0.0020
3.6069	0.5848	-0.0028	0.5065	1.5870	0.0376	-0.0036	0.0020
6.0101	0.9487	-0.0035	0.5124	2.6196	0.0329	-0.0051	0.0020
8.4702	1.3536	-0.0114	0.5332	3.8782	0.0034	-0.0068	0.0020
11.0111	1.8139	-0.0053	0.5503	5.3962	0.0290	-0.0100	0.0020
13.6380	2.3164	-0.0055	0.5817	7.1328	0.0266	-0.0073	0.0020
16.2327	2.8292	-0.0177	0.6005	8.9796	-0.0151	-0.0058	0.0020
18.9951	3.4339	-0.0095	0.6197	11.2735	0.0257	-0.0152	0.0020
0.0582	0.0628	-0.0021	0.5045	0.1312	0.0387	-0.0016	0.0020
0.0544	0.0595	-0.0021	0.5040	0.1214	0.0412	-0.0016	0.0020

CONFIG =0710
RUN NO. = 48
MACH NO. = 1.63
DYN PRESS.= 5.88
REYNOLDS NO. = 305537
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0544	0.0594	-0.0026	0.5027	0.1212	0.0362	-0.0016	0.0030
0.0539	0.0588	-0.0038	0.5033	0.1200	0.0350	-0.0016	0.0030
-3.5290	-0.4573	0.0018	0.4990	-1.3248	0.0499	0.0011	0.0030
-2.3012	-0.2726	0.0026	0.5057	-0.8062	0.0492	-0.0001	0.0030
-1.1663	-0.1185	-0.0015	0.5012	-0.3771	0.0416	-0.0018	0.0030
0.0350	0.0508	-0.0009	0.5033	0.0963	0.0414	-0.0016	0.0030
1.2075	0.2302	-0.0025	0.5052	0.5988	0.0388	-0.0023	0.0030
2.4494	0.4095	-0.0046	0.5057	1.0987	0.0313	-0.0025	0.0030
3.6672	0.5959	0.0001	0.5042	1.6141	0.0464	-0.0041	0.0030
5.9850	0.9462	-0.0075	0.5133	2.6144	0.0193	-0.0051	0.0030
8.4369	1.3507	-0.0029	0.5287	3.8693	0.0308	-0.0068	0.0030
10.9996	1.8128	-0.0121	0.5584	5.3916	0.0066	-0.0096	0.0030
13.6506	2.3207	-0.0176	0.5871	7.1526	-0.0146	-0.0081	0.0030
16.2190	2.8335	-0.0183	0.5982	8.9944	-0.0151	-0.0067	0.0030
19.0073	3.4403	-0.0147	0.6211	11.2954	0.0046	-0.0144	0.0030
0.0444	0.0594	-0.0049	0.5034	0.1213	0.0288	-0.0021	0.0030
0.0439	0.0589	-0.0066	0.5021	0.1202	0.0274	-0.0007	0.0030

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CONFIG -0710
RUN NO. - 49
MACH NO. - 1.63
DYN PRESS. - 5.88
REYNOLDS NO. - 305706
REFERENCE AREA - 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0406	0.0559	-0.0004	0.4987	0.1112	0.0462	-0.0016	0.0040
0.0414	0.0565	-0.0010	0.5021	0.1136	0.0474	-0.0024	0.0040
-3.5325	-0.4601	0.0035	0.4989	-1.3318	0.0549	0.0015	0.0040
-2.3039	-0.2749	0.0015	0.5051	-0.8136	0.0455	-0.0005	0.0040
-1.1454	-0.1177	-0.0020	0.4999	-0.3740	0.0365	-0.0006	0.0040
0.0343	0.0502	-0.0038	0.5010	0.0939	0.0339	-0.0016	0.0040
1.2215	0.2336	0.0009	0.5052	0.6099	0.0474	-0.0018	0.0040
2.4617	0.4124	-0.0052	0.5069	1.1025	0.0302	-0.0034	0.0040
3.6731	0.5905	-0.0016	0.5028	1.6032	0.0425	-0.0028	0.0040
5.9985	0.9470	-0.0047	0.5136	2.6160	0.0316	-0.0038	0.0040
8.4258	1.3496	-0.0051	0.5316	3.8669	0.0209	-0.0064	0.0040
11.0003	1.8133	-0.0030	0.5549	5.3937	0.0389	-0.0091	0.0040
13.6522	2.3192	-0.0113	0.5799	7.1464	0.0078	-0.0072	0.0040
16.2332	2.8297	-0.0171	0.6029	8.9808	-0.0150	-0.0067	0.0040
19.0205	3.4343	-0.0112	0.6205	11.2719	0.0157	-0.0136	0.0040
0.0577	0.0623	-0.0027	0.5044	0.1300	0.0386	-0.0003	0.0040
0.0547	0.0593	-0.0010	0.5049	0.1222	0.0435	-0.0007	0.0040

CONFIG -0710
RUN NO. - 50
MACH NO. - 1.63
DYN PRESS. - 5.88
REYNOLDS NO. - 305403
REFERENCE AREA - 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0534	0.0583	-0.0044	0.4998	0.1188	0.0374	-0.0011	0.0050
0.0541	0.0588	-0.0004	0.5021	0.1211	0.0461	-0.0016	0.0050
-3.4585	-0.4469	0.0006	0.4992	-1.2954	0.0459	0.0019	0.0050
-2.2674	-0.2691	-0.0019	0.5032	-0.7960	0.0379	0.0000	0.0050
-1.1792	-0.1212	-0.0015	0.5005	-0.3841	0.0415	-0.0009	0.0050
0.0359	0.0514	-0.0061	0.5044	0.0989	0.0288	-0.0016	0.0050
1.2318	0.2336	-0.0054	0.5069	0.6113	0.0312	-0.0022	0.0050
2.4622	0.4136	-0.0058	0.5064	1.1054	0.0302	-0.0030	0.0050
3.6407	0.5883	-0.0039	0.5047	1.5971	0.0338	-0.0032	0.0050
5.9853	0.9442	-0.0058	0.5125	2.6073	0.0255	-0.0047	0.0050
8.4764	1.3592	-0.0029	0.5314	3.8952	0.0331	-0.0068	0.0050
10.9859	1.8094	-0.0093	0.5573	5.3816	0.0166	-0.0096	0.0050
13.6506	2.3206	-0.0124	0.5807	7.1524	0.0041	-0.0089	0.0050
16.2346	2.8308	-0.0177	0.6006	8.9845	-0.0163	-0.0071	0.0050
19.0036	3.4333	-0.0112	0.6249	11.2675	0.0172	-0.0161	0.0050
0.0571	0.0617	-0.0055	0.5062	0.1287	0.0287	-0.0020	0.0050
0.0682	0.0628	-0.0009	0.5021	0.1311	0.0424	-0.0016	0.0050

CONFIG -0710
RUN NO. - 51
MACH NO. - 1.63
DYN PRESS. - 5.88
REYNOLDS NO. - 305208
REFERENCE AREA - 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0544	0.0594	-0.0021	0.5010	0.1212	0.0412	-0.0016	0.0080
0.0658	0.0606	-0.0124	0.5008	0.1252	0.0223	-0.0014	0.0080
-3.4721	-0.4412	0.0057	0.4988	-1.2782	0.0595	0.0010	0.0080
-2.3026	-0.2737	0.0026	0.5057	-0.8099	0.0492	-0.0005	0.0080
-1.1559	-0.1177	-0.0032	0.5010	-0.3765	0.0390	-0.0014	0.0080
0.0123	0.0485	-0.0009	0.5034	0.0888	0.0439	-0.0020	0.0080
1.2175	0.2301	-0.0008	0.5058	0.5986	0.0450	-0.0031	0.0080
2.4392	0.4101	-0.0035	0.5058	1.0963	0.0339	-0.0026	0.0080
3.6769	0.5946	-0.0045	0.5029	1.6120	0.0338	-0.0045	0.0080
5.9753	0.9442	-0.0046	0.5119	2.6072	0.0292	-0.0051	0.0080
8.4865	1.3592	-0.0063	0.5325	3.8953	0.0207	-0.0068	0.0080
10.9950	1.8088	-0.0024	0.5503	5.3789	0.0415	-0.0087	0.0080
13.6206	2.3095	-0.0095	0.5777	7.1130	0.0131	-0.0089	0.0080
16.2196	2.8269	-0.0205	0.6069	8.9699	-0.0249	-0.0068	0.0080
18.9891	3.4294	-0.0129	0.6214	11.2553	0.0111	-0.0153	0.0080
0.0471	0.0617	-0.0010	0.5033	0.1286	0.0436	-0.0016	0.0080
0.0439	0.0588	-0.0027	0.5045	0.1200	0.0362	-0.0016	0.0080

CONFIG =0710
RUN NO. = 52
MACH NO. = 1.63
DYN PRESS.= 5.89
REYNOLDS NO. = 305201
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0544	0.0594	-0.0009	0.5022	0.1212	0.0412	-0.0016	0.0100
0.0426	0.0577	-0.0044	0.5022	0.1163	0.0313	-0.0016	0.0100
-3.5290	-0.4566	0.0017	0.4999	-1.3200	0.0485	0.0011	0.0100
-2.3255	-0.2766	0.0032	0.5035	-0.8174	0.0505	0.0004	0.0100
-1.1652	-0.1178	-0.0009	0.5011	-0.3729	0.0439	-0.0005	0.0100
0.0345	0.0502	-0.0061	0.5033	0.0952	0.0289	-0.0016	0.0100
1.2196	0.2319	-0.0002	0.5069	0.6049	0.0462	-0.0022	0.0100
2.4519	0.4124	-0.0058	0.5063	1.1038	0.0301	-0.0030	0.0100
3.6637	0.5903	-0.0050	0.5022	1.6024	0.0264	-0.0037	0.0100
5.9635	0.9425	-0.0052	0.5079	2.6024	0.0268	-0.0047	0.0100
8.4738	1.3570	-0.0046	0.5314	3.8879	0.0245	-0.0068	0.0100
10.9869	1.8105	-0.0053	0.5585	5.3839	0.0291	-0.0096	0.0100
13.6370	2.3153	-0.0130	0.5805	7.1305	0.0042	-0.0081	0.0100
16.2225	2.8298	-0.0182	0.6052	8.9773	-0.0175	-0.0072	0.0100
19.0081	3.4373	-0.0084	0.6237	11.2798	0.0246	-0.0153	0.0100
0.0582	0.0627	-0.0010	0.5043	0.1309	0.0436	-0.0016	0.0100
0.0439	0.0588	-0.0044	0.5022	0.1200	0.0313	-0.0025	0.0100

CONFIG =0710
RUN NO. = 53
MACH NO. = 1.63
DYN PRESS.= 5.88
REYNOLDS NO. = 305079
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0432	0.0565	-0.0038	0.4883	0.1223	0.0287	-0.0023	0.0200
0.0422	0.0559	-0.0032	0.4895	0.1186	0.0312	-0.0019	0.0200
0.0346	0.0490	-0.0021	0.4883	0.0986	0.0339	-0.0023	0.0200
-3.5278	-0.4584	-0.0017	0.4856	-1.3132	0.0371	0.0017	0.0200
-2.3119	-0.2749	-0.0008	0.4913	-0.8037	0.0366	-0.0003	0.0200
-1.1677	-0.1212	0.0008	0.4913	-0.3768	0.0415	-0.0013	0.0200
0.0325	0.0473	-0.0038	0.4941	0.0925	0.0302	-0.0024	0.0200
1.1935	0.2262	-0.0036	0.4956	0.5889	0.0266	-0.0031	0.0200
2.4246	0.4050	-0.0063	0.4966	1.0864	0.0191	-0.0034	0.0200
3.6381	0.5860	-0.0056	0.4961	1.5897	0.0265	-0.0036	0.0200
5.9837	0.9419	-0.0046	0.4958	2.6048	0.0230	-0.0042	0.0200
8.4658	1.3521	-0.0091	0.5195	3.8702	-0.0025	-0.0048	0.0200
10.9680	1.8027	-0.0097	0.5378	5.3597	0.0057	-0.0079	0.0200
13.6181	2.3054	-0.0106	0.5695	7.0940	0.0046	-0.0065	0.0200
16.1971	2.8141	-0.0175	0.5889	8.9187	-0.0194	-0.0064	0.0200
18.9645	3.4215	-0.0286	0.6123	11.2034	-0.0565	-0.0064	0.0200
0.0802	0.0634	-0.0027	0.4963	0.1398	0.0323	-0.0016	0.0200
0.0775	0.0611	-0.0004	0.4957	0.1322	0.0386	-0.0020	0.0200

CONFIG =0705
RUN NO. = 54
MACH NO. = 1.63
DYN PRESS.= 5.9
REYNOLDS NO. = 308614
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0059	0.0445	-0.0042	0.4915	0.0668	0.0269	-0.0017	0.0000
-0.0046	0.0440	-0.0042	0.4881	0.0656	0.0268	-0.0004	0.0000
-3.4644	-0.4519	-0.0022	0.4894	-1.3054	0.0274	0.0014	0.0000
-2.3191	-0.2786	-0.0047	0.4907	-0.8257	0.0245	0.0004	0.0000
-1.1844	-0.1248	-0.0031	0.4903	-0.3988	0.0318	-0.0006	0.0000
0.0149	0.0434	-0.0013	0.4868	0.0643	0.0330	0.0000	0.0000
1.2471	0.2320	-0.0075	0.4874	0.5893	0.0168	-0.0007	0.0000
2.4283	0.4023	-0.0027	0.4899	1.0565	0.0332	-0.0023	0.0000
3.6660	0.5862	-0.0060	0.4853	1.5709	0.0232	-0.0022	0.0000
5.9946	0.9373	-0.0056	0.4926	2.5588	0.0274	-0.0045	0.0000
8.4656	1.3389	-0.0070	0.5060	3.7749	0.0175	-0.0065	0.0000
10.9893	1.7862	-0.0081	0.5278	5.2337	0.0176	-0.0065	0.0000
13.6120	2.2883	-0.0068	0.5356	6.9913	0.0321	-0.0130	0.0000
16.2764	2.8300	-0.0041	0.5535	9.0004	0.0452	-0.0158	0.0000
19.0706	3.4533	0.0063	0.5775	11.4422	0.0832	-0.0179	0.0000
0.0417	0.0577	-0.0083	0.4873	0.1115	0.0201	0.0001	0.0000
0.0377	0.0542	-0.0025	0.4787	0.1003	0.0339	0.0005	0.0000

43

CONFIG =0705
RUN NO. = 55
MACH NO. = 1.63
DYN PRESS. = 5.9
REYNOLDS NO. = 307775
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0376	0.0541	-0.0019	0.4729	0.1000	0.0340	-0.0016	0.0005
0.0371	0.0537	-0.0037	0.4712	0.0991	0.0290	-0.0007	0.0005
-3.4626	-0.4513	-0.0005	0.4703	-1.2980	0.0347	0.0016	0.0005
-2.3171	-0.2778	0.0033	0.4718	-0.8197	0.0468	0.0001	0.0005
-1.1596	-0.1212	-0.0019	0.4717	-0.3834	0.0340	0.0000	0.0005
0.0296	0.0468	-0.0025	0.4724	0.0792	0.0328	-0.0003	0.0005
1.2257	0.2303	-0.0069	0.4715	0.5867	0.0144	-0.0020	0.0005
2.4460	0.4080	-0.0102	0.4708	1.0802	0.0167	-0.0025	0.0005
3.6524	0.5816	-0.0066	0.4716	1.5645	0.0182	-0.0042	0.0005
5.9828	0.9337	-0.0056	0.4794	2.5583	0.0273	-0.0055	0.0005
8.4310	1.3325	-0.0042	0.4917	3.7682	0.0273	-0.0075	0.0005
10.9764	1.7894	-0.0093	0.5112	5.2602	0.0135	-0.0083	0.0005
13.6631	2.3021	-0.0047	0.5343	7.0602	0.0399	-0.0144	0.0005
16.2832	2.8281	0.0014	0.5403	9.0165	0.0656	-0.0171	0.0005
19.0704	3.4581	0.0090	0.5579	11.4782	0.0950	-0.0196	0.0005
0.0538	0.0593	-0.0037	0.4798	0.1176	0.0289	-0.0008	0.0005
0.0617	0.0577	-0.0065	0.4769	0.1115	0.0215	-0.0008	0.0005

CONFIG =0705
RUN NO. = 56
MACH NO. = 1.63
DYN PRESS. = 5.88
REYNOLDS NO. = 306031
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0517	0.0578	-0.0037	0.4742	0.1117	0.0290	-0.0007	0.0010
0.0514	0.0569	-0.0037	0.4756	0.1111	0.0300	-0.0007	0.0010
-3.5307	-0.4601	0.0052	0.4713	-1.3230	0.0548	0.0021	0.0010
-2.3144	-0.2767	0.0004	0.4766	-0.8155	0.0394	0.0005	0.0010
-1.1715	-0.1240	-0.0025	0.4754	-0.3887	0.0329	0.0004	0.0010
0.0312	0.0481	-0.0008	0.4766	0.0843	0.0391	-0.0003	0.0010
1.2377	0.2323	-0.0012	0.4751	0.5963	0.0330	-0.0019	0.0010
2.4306	0.4039	-0.0125	0.4787	1.0748	0.0019	-0.0021	0.0010
3.6501	0.5805	-0.0038	0.4746	1.5682	0.0293	-0.0024	0.0010
5.9910	0.9353	-0.0074	0.4878	2.5720	0.0210	-0.0046	0.0010
8.4393	1.3320	-0.0054	0.4958	3.7804	0.0245	-0.0065	0.0010
10.9680	1.7845	-0.0043	0.5160	5.2578	0.0283	-0.0074	0.0010
13.5470	2.2828	-0.0035	0.5323	7.0001	0.0457	-0.0136	0.0010
16.2627	2.8359	0.0037	0.5504	9.0554	0.0784	-0.0187	0.0010
19.0545	3.4521	0.0130	0.5628	11.4696	0.1128	-0.0195	0.0010
0.0422	0.0579	-0.0020	0.4813	0.1144	0.0340	-0.0003	0.0010
0.0392	0.0551	-0.0060	0.4808	0.1070	0.0191	-0.0008	0.0010

CONFIG =0705
RUN NO. = 57
MACH NO. = 1.63
DYN PRESS. = 5.88
REYNOLDS NO. = 305913
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0484	0.0543	-0.0031	0.4771	0.1042	0.0290	-0.0007	0.0020
0.0382	0.0544	-0.0020	0.4778	0.1031	0.0328	-0.0003	0.0020
-3.5342	-0.4629	0.0030	0.4719	-1.3330	0.0475	0.0008	0.0020
-2.3052	-0.2769	-0.0001	0.4771	-0.8169	0.0369	0.0001	0.0020
-1.1713	-0.1236	-0.0031	0.4789	-0.3893	0.0318	-0.0009	0.0020
0.0309	0.0474	-0.0025	0.4777	0.0842	0.0341	-0.0011	0.0020
1.2474	0.2318	-0.0041	0.4756	0.5963	0.0267	-0.0027	0.0020
2.4431	0.4050	0.0012	0.4762	1.0788	0.0466	-0.0029	0.0020
3.6498	0.5807	-0.0049	0.4758	1.5703	0.0244	-0.0032	0.0020
5.9658	0.9301	-0.0051	0.4843	2.5594	0.0297	-0.0050	0.0020
8.4667	1.3382	-0.0043	0.4992	3.8013	0.0268	-0.0065	0.0020
10.9809	1.7892	-0.0071	0.5213	5.2737	0.0207	-0.0078	0.0020
13.5732	2.2836	-0.0035	0.5292	7.0111	0.0430	-0.0143	0.0020
16.2648	2.8332	-0.0026	0.5554	9.0505	0.0546	-0.0183	0.0020
19.0460	3.4532	0.0107	0.5721	11.4744	0.1028	-0.0213	0.0020
0.0521	0.0572	-0.0049	0.4811	0.1154	0.0239	0.0001	0.0020
0.0381	0.0538	-0.0071	0.4790	0.1043	0.0154	-0.0020	0.0020

CONFIG =0705
RUN NO. = 58
MACH NO. = 1.63.
DYN PRESS.= 5.88
REYNOLDS NO. = 305605
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0384	0.0545	-0.0026	0.4784	0.1044	0.0316	-0.0012	0.0030
0.0381	0.0538	-0.0043	0.4748	0.1041	0.0302	-0.0011	0.0030
-3.4850	-0.4543	-0.0005	0.4723	-1.3091	0.0349	0.0007	0.0030
-2.2928	-0.2748	0.0027	0.4758	-0.8085	0.0492	0.0001	0.0030
-1.1702	-0.1224	-0.0020	0.4743	-0.3868	0.0367	-0.0008	0.0030
0.0071	0.0441	-0.0025	0.4774	0.0744	0.0318	-0.0016	0.0030
1.2588	0.2326	-0.0058	0.4743	0.5993	0.0192	-0.0023	0.0030
2.4321	0.4039	-0.0079	0.4756	1.0766	0.0168	-0.0025	0.0030
3.6511	0.5819	-0.0067	0.4764	1.5741	0.0181	-0.0032	0.0030
5.9774	0.9300	-0.0102	0.4871	2.5609	0.0122	-0.0054	0.0030
8.4524	1.3379	-0.0015	0.4994	3.8004	0.0394	-0.0069	0.0030
10.9722	1.7897	-0.0083	0.5167	5.2785	0.0157	-0.0086	0.0030
13.5787	2.2918	-0.0013	0.5363	7.0355	0.0529	-0.0148	0.0030
16.2780	2.8321	0.0002	0.5482	9.0466	0.0657	-0.0191	0.0030
19.0937	3.4661	0.0105	0.5639	11.5293	0.1035	-0.0215	0.0030
0.0413	0.0568	-0.0037	0.4808	0.1131	0.0278	-0.0012	0.0030
0.0386	0.0545	-0.0043	0.4831	0.1056	0.0266	-0.0020	0.0030

CONFIG =0705
RUN NO. = 59
MACH NO. = 1.63
DYN PRESS.= 5.88
REYNOLDS NO. = 305389
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0365	0.0527	-0.0037	0.4743	0.0993	0.0291	-0.0011	0.0040
0.0381	0.0537	0.0009	0.4760	0.1040	0.0439	-0.0007	0.0040
-3.5177	-0.4578	0.0018	0.4731	-1.3173	0.0424	0.0003	0.0040
-2.2690	-0.2717	-0.0002	0.4781	-0.7995	0.0368	0.0001	0.0040
-1.1924	-0.1247	-0.0025	0.4779	-0.3918	0.0330	-0.0004	0.0040
0.0068	0.0434	-0.0014	0.4738	0.0741	0.0342	-0.0015	0.0040
1.2242	0.2283	-0.0030	0.4751	0.5887	0.0268	-0.0031	0.0040
2.4566	0.4079	-0.0068	0.4773	1.0889	0.0217	-0.0038	0.0040
3.6345	0.5839	-0.0027	0.4770	1.5816	0.0317	-0.0045	0.0040
5.9671	0.9281	-0.0057	0.4842	2.5572	0.0271	-0.0050	0.0040
8.4534	1.3384	-0.0026	0.5018	3.8041	0.0295	-0.0074	0.0040
10.9563	1.7846	-0.0060	0.5213	5.2624	0.0257	-0.0077	0.0040
13.5686	2.2875	-0.0053	0.5333	7.0283	0.0390	-0.0143	0.0040
16.2384	2.8236	0.0025	0.5437	9.0207	0.0733	-0.0186	0.0040
19.0901	3.4727	0.0077	0.5701	11.5499	0.0939	-0.0229	0.0040
0.0545	0.0596	-0.0037	0.4824	0.1217	0.0264	-0.0008	0.0040
0.0508	0.0562	-0.0037	0.4784	0.1119	0.0265	-0.0012	0.0040

CONFIG =0705
RUN NO. = 60
MACH NO. = 1.63
DYN PRESS.= 5.88
REYNOLDS NO. = 305627
REFERENCE AREA = 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0618	0.0572	-0.0026	0.4765	0.1142	0.0315	-0.0016	0.0050
0.0600	0.0555	-0.0025	0.4731	0.1092	0.0266	-0.0020	0.0050
-3.5299	-0.4595	0.0001	0.4708	-1.3204	0.0337	0.0007	0.0050
-2.3155	-0.2771	0.0010	0.4759	-0.8159	0.0418	0.0001	0.0050
-1.1813	-0.1236	-0.0031	0.4721	-0.3893	0.0293	-0.0013	0.0050
0.0206	0.0469	-0.0054	0.4748	0.0842	0.0241	-0.0015	0.0050
1.2603	0.2337	-0.0024	0.4714	0.6041	0.0291	-0.0027	0.0050
2.4221	0.4039	-0.0068	0.4751	1.0765	0.0218	-0.0038	0.0050
3.6545	0.5831	0.0013	0.4722	1.5793	0.0441	-0.0036	0.0050
5.9576	0.9287	-0.0057	0.4860	2.5584	0.0272	-0.0067	0.0050
8.4427	1.3361	-0.0083	0.4988	3.7966	0.0145	-0.0073	0.0050
10.9528	1.7903	-0.0100	0.5145	5.2799	0.0107	-0.0082	0.0050
13.5582	2.2876	-0.0064	0.5270	7.0260	0.0341	-0.0147	0.0050
16.2421	2.8275	0.0082	0.5478	9.0292	0.0931	-0.0186	0.0050
19.0945	3.4672	0.0140	0.5628	11.5304	0.1148	-0.0237	0.0050
0.0657	0.0607	-0.0077	0.4788	0.1244	0.0201	-0.0007	0.0050
0.0746	0.0595	-0.0060	0.4758	0.1216	0.0238	-0.0007	0.0050

CONFIG ▪0705
RUN NO. ▪ 61
MACH NO. ▪ 1.63
DYN PRESS.▪ 5.88
REYNOLDS NO. ▪ 305508
REFERENCE AREA ▪ 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0732	0.0584	-0.0014	0.4747	0.1179	0.0364	-0.0011	0.0080
0.0732	0.0584	-0.0077	0.4730	0.1181	0.0177	-0.0020	0.0080
-3.5188	-0.4590	-0.0011	0.4720	-1.3197	0.0313	0.0003	0.0080
-2.3363	-0.2784	0.0004	0.4785	-0.8206	0.0383	-0.0012	0.0080
-1.1465	-0.1194	0.0014	0.4759	-0.3753	0.0416	-0.0013	0.0080
0.0189	0.0451	-0.0002	0.4755	0.0803	0.0366	-0.0011	0.0080
1.2587	0.2320	-0.0018	0.4726	0.6003	0.0304	-0.0027	0.0080
2.4561	0.4074	-0.0148	0.4743	1.0880	-0.0008	-0.0037	0.0080
3.6181	0.5782	-0.0026	0.4695	1.5642	0.0331	-0.0044	0.0080
5.9659	0.9269	-0.0045	0.4842	2.5546	0.0296	-0.0058	0.0080
8.4207	1.3343	0.0008	0.4966	3.7913	0.0468	-0.0073	0.0080
10.9716	1.7891	-0.0083	0.5167	5.2772	0.0157	-0.0090	0.0080
13.5641	2.2804	-0.0052	0.5199	7.0064	0.0366	-0.0147	0.0080
16.2321	2.8270	0.0008	0.5479	9.0306	0.0658	-0.0195	0.0080
19.0774	3.4705	0.0112	0.5689	11.5425	0.1052	-0.0225	0.0080
0.0657	0.0607	-0.0095	0.4800	0.1244	0.0139	-0.0011	0.0080
0.0753	0.0600	-0.0032	0.4747	0.1240	0.0288	-0.0007	0.0080

CONFIG ▪0705
RUN NO. ▪ 62
MACH NO. ▪ 1.63
DYN PRESS.▪ 5.88
REYNOLDS NO. ▪ 305390
REFERENCE AREA ▪ 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0739	0.0589	-0.0020	0.4759	0.1203	0.0339	-0.0024	0.0100
0.0632	0.0584	-0.0094	0.4730	0.1179	0.0140	-0.0024	0.0100
-3.4469	-0.4481	0.0012	0.4718	-1.2915	0.0386	0.0003	0.0100
-2.2928	-0.2748	-0.0019	0.4734	-0.8083	0.0367	0.0002	0.0100
-1.1808	-0.1234	-0.0042	0.4743	-0.3862	0.0255	-0.0004	0.0100
0.0313	0.0475	-0.0003	0.4749	0.0866	0.0391	-0.0019	0.0100
1.2363	0.2297	-0.0024	0.4720	0.5941	0.0340	-0.0022	0.0100
2.4331	0.4062	-0.0051	0.4729	1.0820	0.0292	-0.0029	0.0100
3.6307	0.5796	0.0036	0.4729	1.5693	0.0540	-0.0031	0.0100
5.9411	0.9236	-0.0028	0.4814	2.5457	0.0371	-0.0049	0.0100
8.4695	1.3417	-0.0049	0.5016	3.8162	0.0267	-0.0065	0.0100
10.9758	1.7901	-0.0049	0.5120	5.2823	0.0280	-0.0077	0.0100
13.5700	2.2861	-0.0030	0.5372	7.0211	0.0464	-0.0147	0.0100
16.2497	2.8319	0.0019	0.5423	9.0503	0.0721	-0.0178	0.0100
19.0617	3.4570	0.0118	0.5698	11.4925	0.1076	-0.0233	0.0100
0.0719	0.0572	-0.0037	0.4758	0.1141	0.0289	-0.0007	0.0100
0.0626	0.0577	-0.0037	0.4793	0.1165	0.0313	-0.0007	0.0100

CONFIG ▪0705
RUN NO. ▪ 63
MACH NO. ▪ 1.63
DYN PRESS.▪ 5.88
REYNOLDS NO. ▪ 305251
REFERENCE AREA ▪ 1.4849

ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0492	0.0550	-0.0048	0.4714	0.1068	0.0217	-0.0024	0.0200
0.0476	0.0539	-0.0025	0.4715	0.1019	0.0292	-0.0020	0.0200
-3.4356	-0.4456	-0.0039	0.4666	-1.2909	0.0176	0.0014	0.0200
-2.3174	-0.2785	-0.0029	0.4685	-0.8240	0.0258	0.0009	0.0200
-1.1942	-0.1251	0.0021	0.4733	-0.3987	0.0419	-0.0005	0.0200
0.0164	0.0435	-0.0036	0.4698	0.0719	0.0268	-0.0020	0.0200
1.2237	0.2283	-0.0035	0.4716	0.5863	0.0305	-0.0031	0.0200
2.4432	0.4062	-0.0068	0.4718	1.0821	0.0144	-0.0026	0.0200
3.6268	0.5773	-0.0072	0.4690	1.5641	0.0144	-0.0023	0.0200
5.9522	0.9236	-0.0091	0.4751	2.5508	0.0122	-0.0045	0.0200
8.4579	1.3359	-0.0152	0.4900	3.8125	-0.0244	-0.0027	0.0200
10.9521	1.7831	-0.0141	0.5097	5.2809	-0.0096	-0.0050	0.0200
13.6023	2.2835	-0.0031	0.5208	7.0386	0.0447	-0.0148	0.0200
16.2440	2.8228	0.0014	0.5450	9.0230	0.0672	-0.0186	0.0200
19.0491	3.4440	0.0030	0.5600	11.4145	0.0715	-0.0183	0.0200
0.0474	0.0532	-0.0065	0.4771	0.1018	0.0190	-0.0003	0.0200
0.0361	0.0521	-0.0094	0.4748	0.0982	0.0116	-0.0003	0.0200

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CONFIG =0700
RUN NO. = 64
MACH NO. = 1.63
DYN PRESS.= 5.91
REYNOLDS NO. = 308533
REFERENCE AREA = 1.4849
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ALPHA	CN	CY	CA	CM	CLN	CLL	F
0.0245	0.0435	-0.0088	0.4503	0.0623	0.0142	-0.0007	0.0000
-3.4912	-0.4583	-0.0010	0.4518	-1.3165	0.0323	0.0021	0.0000
-2.3464	-0.2875	-0.0046	0.4522	-0.8378	0.0243	0.0012	0.0000
-1.2009	-0.1314	-0.0013	0.4502	-0.4132	0.0355	0.0009	0.0000
0.0112	0.0405	-0.0054	0.4498	0.0534	0.0230	-0.0011	0.0000
1.2374	0.2248	-0.0085	0.4513	0.5599	0.0135	-0.0019	0.0000
2.3954	0.3916	-0.0054	0.4529	1.0197	0.0249	-0.0022	0.0000
3.6543	0.5774	-0.0052	0.4581	1.5276	0.0225	-0.0006	0.0000
5.9610	0.9315	-0.0112	0.4714	2.5068	0.0091	-0.0037	0.0000
8.4081	1.3145	-0.0090	0.4872	3.5855	0.0132	-0.0063	0.0000
10.8704	1.7364	-0.0020	0.5001	4.8622	0.0351	-0.0108	0.0000
13.4127	2.1955	-0.0033	0.5125	6.3791	0.0345	-0.0118	0.0000
16.1117	2.7545	-0.0114	0.5173	8.5302	0.0020	-0.0146	0.0000
19.1132	3.4679	-0.0085	0.5087	11.5106	0.0153	-0.0108	0.0000
0.0316	0.0490	-0.0037	0.4508	0.0829	0.0264	-0.0002	0.0000

LIST OF SYMBOLS

Alpha, α Angle of attack (deg)

CN, C_N Normal force

CY, C_Y Side force

CA, C_A Axial force coefficient

CM, C_M Pitching moment coefficient measured from the base

CLN, C_n Yawing moment

CLL, C_ℓ Rolling moment

F   Dimensionless mass flow rate normal to surface, $\dfrac{\rho_w V_w}{\rho_\infty U_\infty}$

Referense area $\dfrac{\pi D^2}{4} = 1.4849$ in.^{2}

Configuration No.   700   Solid model

                       705   0.5 caliber porous cylinder 0.36 porosity

                       710   1 caliber porous cylinder 0.36 porosity

                       715   1.5 caliber porous cylinder 0.36 porosity

U   Velocity component parallel to surface ft/sec.

V   Velocity component normal to surface ft/sec.

w   Wall

∞ Freestream

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